Summary of Public Comments Received on the Department of Transportation's Request for Information on Transportation Equity Data

Docket No. DOT-OST-2021-0056

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Executive Summary

On May 25, 2021, the U.S. Department of Transportation (Department) published a Request for Information[1] (RFI) on Transportation Equity Data (86 FR 28189). This RFI was a response to Executive Order 13985, Advancing Racial Equity and Support for Underserved Communities Through the Federal Government (86 FR 7009, January 25, 2021)[2]. The RFI was open for public comment through July 22, 2021.

The purpose of the RFI was to receive public input on how the Department can develop policies and programs that deliver resources in an equitable way that serves underserved populations, as well as whether and in what ways previous and existing policies and programs have failed to do so and perpetuated systematic barriers to opportunity for these communities. The Department was particularly interested in information about potential assessment tools and methods to allow it to assess the equitability of its policies and programs on an ongoing basis.

The Department received over 300 comments from many individuals as well as the public and private sectors, including think tanks, not-for-profit institutions, advocacy organizations, trade organizations and academics. These comments will inform the Department's comprehensive approach to advance racial equity for all, including individuals who have been historically underserved and adversely affected by persistent poverty or income inequality.

This *Summary of Public Comments* document aggregates and summarizes comments received in response to the RFI's 25 questions, highlighting common themes and tools identified by respondents. It also illustrates how comments were categorized by commenter type.

The purpose of this document is to enable the Department and the public to understand the types of respondents and responses to the RFI and better digest the information received. The full text of all comments received are publicly available at Regulations.gov and may be accessed directly for more details on the summary information shared here.

[1] https://www.regulations.gov/document/DOT-OST-2021-0056-0001
[2] https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/20/executive-order-advancing-racial-equity-and-support-for-underserved-communities-through-the-federal-government/

Overview

The RFI contained 25 questions on subjects relating to equity and transportation. This included questions specifically to identify tools to quantify equity, create an index of indicators of equity, and assess the equity of transportation projects and funding distribution. Other questions related to identifying tools that do not address equity or that actively worsen disparities and institutional barriers, how the Department might establish a percentage of income threshold for transportation costs to determine affordability, how it could determine the effect of pollution and emissions from transportation on disadvantaged populations, how to diversify and maintain diversity in the transportation workforce, and other transportation equity related issues.

In response to the RFI, the Department received 316 submissions representing more than 350 entities, which includes some comments cosigned by multiple persons or entities. Of these submissions, 256 were unique and relevant to the RFI, 17 were comments submitted multiple times, often by two organizations submitting the same comment, and 43 were not germane.

Commenters identified tools and provided meaningful background information. Commenters included state departments of transportation (11 comments), metropolitan planning organizations (12 comments), city and regional transit authorities and public transportation entities (13 comments), other types of local agencies (5 comments), and consulting or transportation solutions companies (31 comments). The Department also received comments from institutions or individuals with academic expertise, including national laboratories (3 comments), think tanks (4 comments), educational institutions (10 comments), independent academic researchers (9 comments), and groups or teams of researchers or experts (3 comments). Additionally, the Department received comments from trade associations (13 comments), international non-profits (23 comments), local non-profits and community organizations (16 comments), advocacy organizations (9 comments), and other companies (13 comments), as well as a single comment from a group of U.S. Congress members and more than 100 responses from citizens.

Salient themes from across the 25 questions include:

- Commenters emphasized the need to measure equity in terms of accessibility of underserved populations to important destinations, such as job opportunities or healthcare and education facilities. Several commenters proposed various methods for quantifying accessibility.
- Expert and institutional commenters shared a wide number of methods, tools, reports, and academic studies relevant to measuring equity in transportation. These tools include data platforms, data sources, indexes, and other software tools, such as TransitCenter's Transit Equity Dashboard.
- In response to questions about setting a transportation affordability threshold as a percentage of income, many commenters pointed to having a 15% threshold for

transportation costs when measuring affordability, or a 45% threshold for combined transportation and housing costs.

- Many of these commenters recommended the work of the Center for Neighborhood Technology and particularly its Housing + Transportation Affordability Index as a tool for assessing transportation cost burden. Commenters identified several existing tools that do not serve equity considerations, particularly those tools focused on vehicular transportation, such as Level of Service.
- Commenters also stated that some tools, such as cost benefit analysis, were not designed with equity in mind, and are not helpful, but these tools could be modified to account for equity considerations.
- To help ensure individuals from underserved populations are represented in data collection efforts, commenters emphasized the need to actively engage members of underrepresented communities, design data collection efforts that accurately reflect the experiences and perspectives of individuals from these groups, and take steps to encourage higher participation in surveys and other data collection efforts.
- Commenters had a number of suggestions regarding the role the Department should take in addressing data related to equity issues, with some wanting it to take specific actions to establish centralized data infrastructure and development and adopt uniform standards.
- Many commenters suggested implementing a community-based apprenticeship program with outreach to diverse schools and communities to diversify the transportation workforce.
- Commenters noted key factors to retaining workers from underserved populations include companies maintaining diversity, equity, and inclusion standards, as well as providing the mentorship and opportunities for exploration.

The next section aggregates and summarizes comments received in response to each of the RFI's 25 questions, highlighting common themes and tools identified by respondents. The final section illustrates how comments were categorized by commenter type.

Comment Summaries by RFI Question

1. Methods to assess equity in transportation and policies that perpetuate barriers.

What are feasible methods for the Department to assess equity in transportation, including whether, and to what extent, Departmental programs and policies perpetuate systemic barriers to opportunities and benefits for underserved communities?

As well as recommending a number of tools, methods, guides, and analyses on equity, many commenters emphasized the importance of access to opportunities such as jobs and other key locations such as schools and healthcare as an important measure of equity.

A number of commenters noted the need to examine public transit access to opportunities and to services such as education and healthcare. Commenters that made this point include an educational and research institution, several transportation technology or solutions companies, a national non-profit, and a transit authority. A transportation solutions company stated that the Department should prioritize "people-centered metrics" and that traditional federally backed methods, such as the Highway Capacity Manual, often failed to do this by prioritizing motor vehicle usage, commute travel, and minimizing delays for drivers.

A transit authority commented that methods should adequately address questions about both accessibility and affordability. These questions would include questions on accessibility, such as how many jobs can be reached by bus, rail, and other modes over within 30 minutes; how this compares to other neighborhoods; what the disparities are for race/ethnicity, income, and gender; and whether a project increases or decreases accessibility. It should also include questions on the average commuting cost for rail, bus, and other modes, and if there are discrepancies for race/ethnicity, income, or gender.

A local non-profit recommended comparing commute times between these modes as well as average delays and traffic data, carbon emission analysis, and commute time at various times of the day. One commenter stated that performance guidance and assessments should consider measures of people's access to employment, education, and essential destinations, such as healthcare, groceries and healthy food, and childcare, by population segment characteristics. A local non-profit recommended comparing job opportunities available with a car to those available with a private vehicle.

A transit authority commented that measurable parts of access could include access to opportunity (for example, jobs and schools with 30 minutes), access to amenities (for example, grocery stores within 15 minutes), access to vehicles (for example, number of vehicles per worker), access to public transportation (for example, public transit within ¼ mile of home, or seat miles per capita), and access to pedestrian and bicycle infrastructure (for example, WalkScore or Bikescore) . The commenter stated that time of commute, affordability, collision

(including injuries and fatalities), and air quality also represented important variables. The commenter further stated the appropriate level of granularity is the census tract.

A number of commenters, including two transportation or consulting companies, recommended the TransitCenter Transit Equity Dashboard, which assesses the level of transportation equity in cities such as New York, Los Angeles, Chicago, Philadelphia, and Washington, DC. The tool measures reliability, efficiency, affordability, and service intensity of transit systems for populations including low-income, people of color, essential workers, and transit-reliant persons. It also measures how accessible resources such as jobs, grocery stores, healthcare, universities and colleges, and green spaces are via transit. A company that had recommended taking an accessibility-based approach to measuring transportation praised the TransitEquity Dashboard as a good tool for measuring accessibility for people living in poverty, Black people, other people of color, and single mothers.

A national laboratory also suggested metrics to evaluate how transportation projects enhance or negatively impact accessibility to job, health, and recreation opportunities, transportation affordability, and transportation effects on human health, environment, and climate change. The commenter also recommended indices and clustering as a way to determine if a community is disadvantaged. The commenter further recommended "procedural justice" metrics, such as real participation of disadvantaged communities in decision-making.

A company commented that quality of life indicators should be included in any equity analysis, and outcomes such impacts in education, jobs, healthcare, childcare, or eldercare should be evaluated. The commenter further stated that outcomes determine if equity exists, and for this reason agencies should be required to monitor and reevaluate changes to see if they have long-term negative impacts on Title VI protected populations.

Several commenters, including a company and a local non-profit group, stated that more had to be done improve equity access measuring in relation to public transit. The local non-profit stated that analyzing the typical peak and non-peak trips is no longer sufficient because commuting has shifted, and analysis of peak hours is beneficial to white-collar workers, but not to middle- and lower-income persons who often commute outside peak hours. The commenter further stated that the commuter rail fare structure should be evaluated for equitable access

A national non-profit commented that two major ways to assess transportation equity are access to affordable and reliable transportation options and transportation cost burden.

A company recommended examining the Denver Department of Transportation & Infrastructure Blueprint Denver. The former is the city's transportation and land use strategic plan and uses a social equity framework to assess access to opportunity, among other indicators. This relates directly to transportation equity. Within access to opportunity, the framework contains an equity index, which also includes access to grocery stores and parks and open spaces.

Two technology companies recommended the use of Equity Index Solution, an equity index dashboard developed by CARTO and Google.

An MPO recommended review the equity analysis in the Transportation Improvement Program (TIP) for Pennsylvania, which includes maps and analysis of bridge and pavement asset condition, safety data, and transit accessibility alongside demographic information including EJ and Title VI populations.

A transportation solutions company recommended the Cityfi Social Impact Calculator as way to capture and communicate the full impact of public investment in a community. The calculator quantifies equity, as well as economy, environment, health, and safety. The commenter also recommended Cityfi Transportation Happiness Metric as a tool that uses both qualitative and quantitative metrics to evaluate the passenger experience of different modes of transportation

The commenter identifies Oakland Department of Transportation Geographic Equity Toolbox as a tool to illustrate racial disparities, in this case in Oakland. The tool identifies neighborhoods for equity-base intervention. It then places these neighborhoods in the context of environmental justice and traffic safety. For traffic safety, it identifies the high-injury intersections and corridors, and their overlap with priority neighborhoods.

TNExT is a tool brought up in comments from a transportation solutions company, and a state DOT. This tool can create a number of reports retrieving information related to transportation and equity.

A transportation company recommended Swiftly's On-Time Performance and Headways Insights to track on-time performance and schedule adherence and Speed Map and Swiftly Run-Times to analyze route and schedule efficiency and reoccurring slowdowns and bottlenecks.

A state DOT commented that it collaborated with a regional MPO and transit authority, and that they use an equity matrix developed by the Portland Bureau of Transportation, which is based on race, income, and English proficiency, and that this had been valuable in reaching conclusions on equity in its community.

A transportation solutions or consulting company recommended the use of General Transit Feed Specification (GTFS) data as a way of easily mapping transit stops.

A company stated that the Department should assess number of crashes (including injury and property damage), the age and condition of infrastructure (pavement, bridges, signage, protective barriers, markings), and the average daily traffic (ADT) across each county on a per capita basis and compare this with average household income, racial mix, and other data sets to get a better picture as to how transportation policy is serving underserved communities.

A transportation solutions or consulting company commented that the Department should use the federal rulemaking process to expand the National Transit Database (NTD) to collect statistics

and data broken out by user demographics including services delivered to, and usage by, underserved communities.

A state DOT recommended that the Department develop goals first, then identify the appropriate data source to track progress. The commenter stated that the Department could prescribe the appropriate data sources to use, such as commute times, accessibility, road quality, and others, and assess these by demographics, such as race, income, and other characteristic of underserved groups, to identify where inequalities exist, then review affected programs and policies. Similarly, a state DOT commented that they map out crashes related to bicycles to point to where conditions could be improved relating to walking and biking, and that this could be evaluated to distribute funding to the most affected areas and mapped using GIS.

Several commenters argued that the Department must define equity with regards to transportation. These commenters believed that they must start with a clearer definition of what terms mean beyond definitions in Executive Order 13985 by adding a transportation lens. The commenter goes on to state that establishing formal definitions around these terms will create a culture around equity and ensure future department leadership on this issue.

A national non-profit stated that the Department should collect and disaggregate a number of demographic factors, and that these should include disability. The commenter further recommended the Department gather disaggregated data on on-demand travel modes, accessibility of sidewalk and curb ramps, and the effects of the pandemic on overall transportation access to people with disabilities.

Tools and methods mentioned by commenters include:

- ArcGIS Network Analyst
- CDC's Social Vulnerability Index
- Cityfi Transportation Happiness Metric
- Economic Value Atlas,
- Envision Tomorrow
- Equity Index Solution
- General Transit Feed Specification (GTFS) data
- MTC Equity Platform
- MTC Equity Priority
- National Equity Atlas https://nationalequityatlas.org/
- SNS Community Engagement Toolkit
- Street Story: Collecting experiential data from community
- UCLA Center for Neighborhood Knowledge Transportation Disparity Mapping tool
- University of South Florida Center for Urban Transportation Research:
    - Transportation Equity Toolkit : https://ctedd.uta.edu/research-projects/transportation-equity-needsassessment-toolkit/

    - Transportation Equity Scorecard: A Tool for Project Screening and Prioritization: https://ctedd.uta.edu/research-projects/transportation-equity-scorecard-a-tool-for-project-screeningand-prioritization/
    - Integrating Equity into MPO Project Prioritization: https://ctedd.uta.edu/research-projects/integratingequity-into-mpo-project-prioritization/
- TransitCenter
- The Transportation Equity Toolkit
- Transportation Injury Map System (TIMS) https://tims.berkeley.edu/
- TNExT
- Portland Bureau of Transportation (PBOT) equity metric: https://www.portlandoregon.gov/transportation/74236

Analyses and manuals mentioned by commenters include:

- Six analysis steps from the Government Alliance on Race & Equity's Racial Equity Toolkit (https://www.racialequityalliance.org/wp-content/uploads/2015/10/GARE-Racial_Equity_Toolkit.pdf)
- SCE evaluation process described in Part 2, Chapter 4 of the Florida DOT PD&E Manual
    - SCE Program Info: https://www.fdot.gov/environment/pubs/sce/sce1.shtm
    - ETDM Manual: https://www.fdot.gov/environment/pubs/etdm/etdmmanual.shtm
    - PD&E Manual https://www.fdot.gov/environment/pubs/pdeman/pdeman-current
- "Civil rights guidance and equity analysis methods for regional transportation plans: critical review of literature and practice" by Alex Karner and Deb Niemeier (Karner & Niemeier 2013)
- California Air Resources Board (CARB) and UCLA Center for Neighborhood Knowledge Transportation Disparity Mapping tool
- Denver Department of Transportation & Infrastructure Blueprint Denver
- Transportation Improvement Program (TIP) for Pennsylvania, which can be found at www.dvrpc.org/TIP/PA/pdf/EJ_TitleVI.pdf and www.dvrpc.org/TIP/PA/pdf/EJAppendix.pdf.

Reports and papers mentioned by commenters include:

- From Mobility to Accessibility: Transforming Urban Transportation and Land-Use Planning
- Levine, J., Grengs, J., & Merlin, L. A. (2019). From Mobility to Accessibility: Transforming Urban Transportation and Land-Use Planning. Cornell University Press.
- https://www.cornellpress.cornell.edu/book/9781501716089/from-mobility-to-accessibility/

- Committee of the Transport Access Manual. (2020). Transport Access Manual: A Guide for Measuring Connection between People and Places (p. 232). Committee of the Transport Access Manual, University of Sydney. https://hdl.handle.net/2123/23733
- Martens, K. (2016). Transport justice: Designing fair transportation systems. Routledge.

2. Assessing equity in Federal funding distributions.

How should the Department assess equity in Federal funding distributions? What data sources would be required for such assessment? Do such data sources exist currently? What new data would need to be collected, whether formula, discretionary, or other funding?

Several commenters (roughly 11) noted that there is a need for better overall data when it comes to equity in distribution of funding. Not only is there a need for better overall data but there is also a need to evaluate how funding is implemented and improving standards in underserved communities. Commenters mentioned that adding more diversity, ADA, and geographical data to the funding allocation could add equitable value to these areas. For example, needs can vary significantly from a region's demographics, and this should be considered or accounted for when determining funding distributions.

A couple commenters mentioned funding set-asides for Federally Recognized Tribal Governments where appropriate so that Tribal Nations' transportation departments have resources to improve road safety and mobility in and around tribal communities. The funding that the Department provides to smaller scale agencies should be accompanied with requirements for equitable implementation.

Multiple commenters (roughly 7) suggested using census data or currently use census data to help allocate grants and funding. An MPO mentioned using census data to identify block groups where populations are most concentrated within the planning area. This census data gives an idea of where to focus attention when evaluating environmental justice or equity concerns. Additional demographic factors included in census data which have not yet been specifically required for consideration, but which have significance to transportation equity may include disability status, private vehicle ownership, and age. These factors can all help determine how dependent on walking, biking, or public transportation a population may be in each neighborhood and will likely play an expanded role in future analyses.

A transportation solutions company mentioned that equity in federal funding distributions can be assessed geographically, e.g., through per capita spending. The Department could use existing data sources within the U.S. government (federal, state, and local) to identify the specific gaps.

A trade organization mentioned that starting the Areas of Persistent Poverty (AoPP) Program provided an opportunity to focus discretionary funding to begin to overcome historic inequities.

A commenter suggested the Department could conduct true cost-benefit analyses that consider the health, safety, and environmental impacts of proposed projects. Another mentioned the need for funding so that transit agencies have the same technology standards and updates.

A transit entity noted how they assess equity in funding distribution by determining the share of funding for a project that benefits people with low incomes and people of color and whether this share is higher than their share of the region's population. The share of "benefit" may be calculated based on the current share of usage by underserved groups.

A couple commenters mentioned that equity considerations can vary state by state. These plans should take local conditions into account and would allow states to set standards and practices that would be meaningful in their communities.

3. Tools for analyzing equity in transportation investments, policies, and programs.

What assessment tools currently exist to analyze equity in transportation investments, policies, and programs? Can these tools be scaled to a national level? If so, please describe the nature and level of detail of the data and how? the data are collected or retrieved. If possible, please discuss any privacy concerns or barriers for collection of these data.

Commenters make use of a wide variety of tools in conducting transportation-based equity analysis. Responses featured numerous recommendations for specific tools, as well as descriptions of the methodologies and resources behind the development of custom tools to reflect individual organizations' unique needs and goals.

Data from the U.S. Census and American Community Survey (ACS) make up the backbone of many tools cited by commenters. At least 40 commenters mentioned this data in some capacity, including state DOTs, and transit authorities. Seven commenters including state DOTs and a MPO also mentioned General Transit Feed Specification (GTFS) data as a source which can be used by analysis tools. Some commenters, including transit authorities, an MPO, and a local agency, also mentioned using tools building on data related to compliance with existing obligations such as Title VI of the Civil Rights Act or federal environmental justice requirements.

Multiple commenters have incorporated geographic data into atlas or mapping tools. For example, a transit authority developed a map-based tool assessing the geographic distribution of marginalized communities in its service area. A number of these tools make use of Geographic Information Systems (GIS) technology, with 13 commenters in total referencing GIS, including a state DOT and MPOs. Of these, several commenters specifically mentioned Esri's ArcGIS.

Many commenters have developed specific tools to meet their own needs. An educational institution noted that, while there isn't a set of universally used tools to analyze equity in transportation investments, policies, and programs, there is a common set of methodologies and approaches, with a focus on distributional analysis comparing performance measures experienced by traditionally marginalized communities with those experienced by the general population. Several commenters, such as a transit authority and a local agency, discussed statistical models and other tools they developed to identify underserved populations and communities as potential focuses of equity efforts. Commenters highlighted a range of indicators and assessments to draw from in developing an equity analysis process, with suggestions encompassing consideration of areas including:

- Mobility (e.g., measuring travel time and distance or analyzing changes to service).
- Accessibility (e.g., establishing metrics to determine ease of access to transit systems or travel to jobs or other important locations).

- Affordability (e.g., measuring total cost and share of household income paying for travel).
- Environmental and public health impacts (e.g., measuring air quality in specific locations, tracking pedestrian injuries).
- Impacts on specific marginalized groups (e.g., including racial equity impact assessments in analyses of transportation projects or investments).

Many commenters identified specific tools for analyzing transportation equity. Among those mentioned by more than one commenter are:

- TransitCenter's Equity Dashboard
- Center for Neighborhood Technology's AllTransit Metrics
- Virginia Smart Scale
- Oregon Department of Transportation's Transit Network Explorer Tool (TNExT)
- Greenlining Institute Clean Mobility Equity Playbook
- Urban Institute's Unequal Commute product
- Los Angeles County Metro's Rapid Equity Assessment tool
- Atlanta Regional Commission evaluation tools
- Caltrans Equity Index Pilot Project
- Kansas Department of Health and Environment County Health Outcomes Ranking

A sampling of research and reports cited by commenters includes:

- Litman, T., "Evaluating Transportation Equity: Guidance for Incorporating Distributional Impacts in Transportation Planning," Victoria Transport Policy Institute, 2014.
- National Cooperative Highway Research Program Report 666: "Target-Setting Methods and Data Management to Support Performance- Based Resource Allocation by Transportation Agencies," 2010.
- Williams, K., Golub, A., "Evaluating the Distributional Effects of Regional Transportation Plans and Projects," 2017.

4. Tools to analyze equity in state and metropolitan transportation planning processes.

What assessment tools and best practices currently exist to analyze equity in state and metropolitan transportation planning processes?

Commenters agreed that equity-related performance measures need to be adopted nationally and equity indicators need to drive local decision-making. One commenter noted that ideally a national tool would have some standard indicators but would also allow the user to set their own weighting and add locally specific data to reflect local priorities.

Commenters provided a range of equity indicators touching on transportation, environmental, health, and community-related metrics.

Commenters agreed that the federal government's national transportation performance measures are an important place to incorporate these concepts. Commenters suggested there should be a new national performance criterion that measures access, disaggregated by race and income, to key destinations, such as employment, health care, government, and educational centers. As part of these updates, the federal government should require some national equity-oriented metrics, which would then institutionalize this type of approach by all DOTs and MPOs, and include disaggregation of certain transportation outcomes by race, income, gender, and disability status.

Commenters noted that the Department must determine the outcomes it seeks to target to identify the appropriate indicators because this will affect selection, weighting, and aggregation of variables. For example, one commenter stated if the Department's goal is to define an underrepresented community, it can use indicators of age, race, income, and education (0210).

Commenters indicated data are available at several geographic levels depending on the indicator and recommended the data be gathered at as small of a geographic area as possible to balance geographic and statistical precision (0215, 0216). A state DOT suggested the appropriate geographic level would depend on the project size and the population it is affecting. (0249) This commenter noted measures could be constructed to weigh the interests of different disadvantaged groups by community outreach and engagement, surveys, public forums, accessibility for feedback via a website, and social media.

A state DOT recommended that the Department:

- Consider using GIS-based tools.
- Evaluate the Washington Tracking Network's Environmental Health Disparities Map with the potential to develop this type of resource nationally.
- Evaluate the Department's Transportation and Health Tool, which includes indicators that could be enhanced to create transportation equity indices.
- Evaluate tools for social cost-benefit analysis.

5. Transportation equity indices and key indicators.

If the Department were to create transportation equity indices that include important transportation and equity variables, what key indicators should they include? What is the suggested methodology and level of aggregation for this index? What is the appropriate geographic level? How could such measures be constructed to weigh the competing interests of different disadvantaged groups?

The consensus among commenters is that equity-related performance measures need to be adopted nationally and equity indicators need to drive local decision-making.

Social equity indicators mentioned in the comments include:

Transportation-related:

- Commute times
- Efficiency, such as measures of average wait times, including for transfers
- Reliability, such as the number of delays and on-time performance
- Safety and security such as lighting, cameras, sidewalks, protected pedestrian paths to access transit, etc.
- Access to station/bus shelter amenities such as cooling, heating, roofing, a bathroom
- Accessibility and connectivity to other modes of transportation like biking, walking, buses, and cars
- Safe routes to schools

Environment-related:

- Clean air and positive health benefits (various pollutant levels)
- Reduction in greenhouse gases
- Reduction in vehicle miles traveled
- Number of vehicles owned

Health-related:

- Asthma
- Obesity
- Diabetes
- Heart attacks
- Chronic disease preventable hospitalizations
- Life expectancy
- Number of missed doctor’s appointments

Community-related:

- Race

- Ethnicity
- Income
- Disability status
- Access to jobs
- Access to education
- Access to grocery stores
- Connectivity to medical services, childcare, education, parks, social life
- English as a second language
- Gender
- Digital literacy

Commenters agreed the federal government's national transportation performance measures are an important place to incorporate these concepts. Areas of agreement included that there should be a new national performance criterion that measures access, disaggregated by race and income, to key destinations such as employment, health care, government, and educational centers, and that as part of these updates, the Federal government should require some national equity-oriented metrics, which would then institutionalize this type of approach by all DOTs and MPOs, and include disaggregation of certain transportation outcomes by race, income, gender, and disability status.

Commenters also agreed that specific indicators would have to relate, and perhaps be ranked, to what the index is trying to measure. There was a consensus to include weights for groups considered particularly disadvantaged or for underserved communities. Some commenters noted that household level data would have the most available geographically.

The Washington Department of Transportation offered the following as part of their response:

"The appropriate geographic level would depend on and be consistent with the project size and the population it is affecting. Measures could be constructed to weigh the interests of different disadvantaged groups by community outreach and engagement, surveys, public forums, accessibility for feedback via a website, and social media. Rather than describing interests as 'competing', data approaches that recognize the compounding effects of multiple facets of identity will more accurately reflect people's everyday realities. When data collection is targeted to understand the needs of those who are most deeply disadvantaged, addressing those needs will benefit everyone (sometimes referred to as the curb- cut effect')."

They referenced using GIS-based tools, the Washington Tracking Network's Environmental Health Disparities Map, and the Department's Transportation and Health Tool (which includes indicators that could be enhanced to create transportation equity indices) and noted that tools should be evaluated for social cost-benefit analysis.

6. Threshold for transportation affordability.

Housing affordability in the United States is measured in terms of percentage of income (i.e., the current threshold is 30 percent of income). Is there a similar threshold for ''transportation affordability'' currently in use by planning practitioners and planning agencies? What are some methods and strategies that the Department can use for determining and assessing the level of a transportation overburden cost standard?

The most common recommendations for an "affordability threshold" were for transportation costs of15% or more of income or combined transportation and housing costs of 45% of income to constitute overburden. These numbers were based on Center for Neighborhood Technology's (CNT) work on the issue of transportation affordability. Commenters that recommend the 45% combined threshold included a state DOT, a trade association, multiple transit authorities, and a group of experts. An MPO, which also cited CNT, rounded up the combined threshold recommendation to 50% of income.

Many commenters, including two state DOTs, a regional transit authority, a national non-profit, and a MPO, recommended the Housing + Transportation cost index[3], developed by CNT, as a useful metric in assessing transportation cost burdens in concert with housing cost burdens. A national non-profit noted this was adopted by Housing and Urban Development as the Location Affordability Index, and is used by many cities, states, and regional agencies. Other commenters also recommended using the Location Affordability Index.

A state cited the Housing and Transportation Affordability Index developed by the County of Los Angeles, which compared several counties in California. The same DOT stated that the prices of gasoline, diesel, and electricity would need to be factored into any affordability index tool

A national non-profit organization pointed out assessing housing burden as percentage of income could leave out many older adults do not have income and have not qualified for Social Security and Medicare due to the nature of their work, and recommended that the older adults be taken into consideration in accounting for transportation cost burdens.

An MPO also recommended the MORPC Regional Housing Strategy.

A public transit authority stated that any policy to create an affordability threshold should be accompanied by funding to maintain affordable fairs and user fees.

[3] https://htaindex.cnt.org/

Overburden Threshold Recommendations

15% of income for transportation

45% percent of income for transportation and housing

Methods and Tools

Housing and Transportation Affordability Index, County of Los Angeles

Housing + Transportation CNT (https://htaindex.cnt.org/)

Location Affordability Index, Housing and Urban Development

MORPC Regional Housing Strategy

7. Measuring benefits and drawbacks of Federal transportation investments to underserved communities.

How should the Department identify and measure the benefits and drawbacks (e.g., safety, wellbeing, and mobility benefits) of Federal transportation investments to underserved communities? How should the Department identify and measure the social cost of inequity in transportation projects or policies in underserved communities?

Commenters identified many factors that should be considered when analyzing benefits and drawbacks of transportation investments to underserved communities. One commenter stressed the importance of identifying the term 'underserved communities' to properly measure the social cost of inequity. Most comments suggest that understanding what improvements need to be made in an underserved community is important before serving those communities.

A transit authority provided the following detailed list of factors that should be analyzed to identify benefits and drawbacks:

i. Access
    1. Proximity to relevant origins and destinations
        a. Historic rail and highway development patterns prioritize suburbs and high-density, middle and high wage employment centers, which may not serve low-income, communities of color
    2. Multimodal connections
        a. Low-income communities of color are more likely to ride bus than rail. This is likely exacerbated by limited connectivity between providers, particularly in metropolitan regions.
    3. Safety
        a. Crime. Important to note that safety data may be biased due to over-policing of low-income and Black, indigenous, and people of color (BIPOC) communities.
        b. Collisions
    4. Accessibility
        a. Last mile connections
        b. Station access
ii. Affordability
    1. Regressive fare structures
    2. Lack of multimodal fare integration increases costs
        c. Then identify strategies to address these mobility needs
        d. Score transportation investments on their ability to integrate these strategies/address these needs

Additional factors mentioned by other commenters include data on air quality/pollution, consensus data, public health, disaster relief responses, local construction projects, and access to community and opportunities.

Several comments emphasized a need for public involvement including meetings and surveys. Many cited that the current Title VI/Environmental Justice should be utilized as a framework to for how the Department identifies this information. Several noted that the Department should work with State DOTs to undertake similar processes that identify historic racial inequities of transportation projects and develop reparation strategies for those communities and racial populations that have been negatively impacted by past transportation investments.

Other examples of existing programs mentioned that are used for this type of analysis are:

- 'PennDOT Connects'
- VA DOT's Smart Scale process
- King County Washington's Metro Mobility Framework (https://kingcounty.gov/depts/transportation/metro/about/planning/mobility-framework.aspx)
- Portland Bureau of Transportation
- Minneapolis Department of Public Works
- The Government Alliance for Race and Equity (https://www.racialequityalliance.org/)

8. Methodologies for measuring access.

What methodologies exist for measuring access to goods, services, education, recreation, and employment; well-being; and transportation reliability for people of color and other underserved groups? What are the limitations of the current measures or methods? What data is needed to overcome those limitations? How should the Department capture transportation's ability to contribute to opportunities that help improve equity for underserved communities or individuals?

Several commenters recommended various accessibility measures of the ease with which one can travel, and the number of opportunities for interaction, such as job, healthcare, education, and recreation. One commenter identified various types of methods for measuring accessibility, including:

- Distance to the nearest subway stop, freeway interchange, school, hospital, etc.
- Cumulative opportunities within an access distance or time threshold (isochrone method)
- Gravity/entropy model denominators (Hanson's measure; Hansen, 1959)
- Expected maximum random utility-based measures (e.g., logit model 'logsums'; Ben-Akiva and Leman, 1985)

This commenter stated the most recommended method in the academic literature is the logsum, which captures the change in accessibility or activities available to an individual based on a change in travel time. However, this commenter cited literature indicating this method is often among the most difficult to conduct due to model and data limitations and most difficult to communicate because the concept of logsum and accessibility is not widely understood and difficult to explain.[4]

Several commenters recommended various approaches to geospatial analysis. One commenter noted:

> Using existing geospatial data, it is possible today to calculate the distance from each address and census tract to nearest employment centers (jobs clusters), higher education facilities, and healthcare facilities and clusters. In addition, combining geospatial data with data sources like crime and sociodemographic data can enable a more holistic analysis of the impact of transportation on underserved and vulnerable communities.

Another commenter provided an example of using geospatial analysis of accessibility measures to assess locational equity of parks in a metro area. This commenter used spatial autocorrelation of the various demographics to determine areas of need based on equity. The commenter used minimum distance, travel cost, and gravity potential as measures of accessibility. The results of

[4] The Pros and Cons of Using the Change in Destination Choice Logsums as a Practical Measure of User Benefits, Villaneuva et al (2018).

the spatial auto correlation values and the accessibility measures were then correlated to determine which block groups were underserved based on the selected demographic.

Other commenters recommended isochrone methods. For example, one commenter explained a methodology used in the transit industry is mapping walksheds from transit station areas using GIS analysis and incorporating U.S. Census data that contain race and ethnicity information to consider the level of access to transit based on spatial availability (0123). According to this commenter, this approach does not account for quality of the pedestrian environment or alternative modes that underserved communities may use, such as bicycles, carpools, or other modes. This commenter indicated transit accessibility can be measured similarly by analyzing the area within a certain time of an origin point using either or both the transit and pedestrian networks.

One commenter recommended travel demand models for analyzing destination access. According to the commenter, these models are ideally suited for regional-scale analyses. Travel demand models allow for analyses of access to any number of destinations, but are complex and require a high level of staff knowledge and significant data collection costs. Additionally, the regional-scale analyses do not represent bicycle or pedestrian trips well, nor can they be used to analyze the impacts of small-scale transportation projects. This commenter noted GIS-based tools, such as ArcGIS or off-the-shelf destination access tools, are better suited for these types of projects.

Some commenters noted recent advancements on the measurement of access among individuals in metropolitan regions. Examples of sources cited by commenters include:

- University of Minnesota's Accessibility Observatory.
- TransitCenter's Transit Equity Dashboard
- Urban Institute
- University of Wisconsin's Measuring Accessibility report
- University of Sydney's "Transport Access Manual"
- Victoria Transport Policy Institute's "Evaluating Accessibility for Transport Planning"

Other commenters have considered equity as it relates to requirements of Title VI of the Civil Rights Act of 1964. One of these commenters noted each week it publishes new data on mobility and consumer spending trends down to the census tract level. This commenter also twice a year publishes new seasonal datasets that have complete trip and population tables down to the network link level. This data can be used to ensure compliance with Title VI.

Some commenters recommended the Department involve community-based organizations (CBOs) in transportation planning. These commenters noted CBOs serve people and places that are underrepresented and they have knowledge of local assets that would be unknown to planners from outside the area. Some of these commenters stated CBOs need greater capacity to engage in transportation decision making, including being compensated for their participation.

Several commenters identified limitations of current analyses of accessibility. For example, some commenters noted these analyses account for whether people could access a destination, not whether they want to access it or can afford the services provided. One commenter noted challenges related to accessibility measures include the subjective nature of accessibility, the setting of accepted baseline threshold, and the economic valuation of accessibility. Similarly, another commenter identified the focus on maximizing private automobile speeds while ignoring multimodal accessibility or undervaluing the safety of other travelers.

9. Methods to determine programs' effect on safety and security of underserved people.

What methodologies can be employed to determine how well the Department's programs comprised of engineering, enforcement, and education are affecting the safety and security of underserved people? What equitable planning methodologies can be employed by organizations with limited human and computing resources, especially in rural areas?

Active data research

Several commenters noted that, when implementing equity standards, workplace-based education has led to a better understanding of equitable needs. Education in community school systems and direct conversations with active community members have helped communicate areas that need situational and overall support and awareness. For example, rural areas have less access to internet and cell service, causing a need for more in-person support and education.

One commenter mentioned applying the Indigenous Workforce Strategy principles to their outreach programs and optimized their Indigenous participation and connection with Disadvantaged Business Enterprises in their community.

Roughly seven commenters mentioned needing more data on fatal crash rates in underserved and minority communities. One commenter noted that sociological methodologies such as community participation should be applied in the planning and design processes. Another mentioned that data on households who own cars would help project areas with more pedestrian activity. Locations with high rates of pedestrian-involved crashes may indicate not only a safety problem but also a problem with pedestrian accessibility. The data is presently available to measure pedestrian crashes and their relationship to households without a vehicle. An education institution noted that some agency data on safety don't contain information on race and income.

Multiple commenters' (roughly five) analyses of enforcement data show that people of color experience disproportionate traffic stops, enforcement on transit, and pedestrian stops. This disproportionate enforcement can and has resulted in death, which should be as unacceptable as deaths from traffic crashes. Methodologies used for the analysis of the Department's programs should use a broader definition of safety and security informed by people of color to reflect these crucial differences in lived experiences. In addition, a commenter noted that 33 to 50 percent of police use-of-force incidents involve a person with a disability.

Suggested data research and recommendations

A couple of commenters suggest that the Department should take steps to remove or reduce the role of traffic and police enforcement as an important step in ensuring equity in transportation. Data should be used to reduce disparities between enforcement against people of color by developing best practices. Local communities should focus on encouraging safe practices through best practices including more frequent crosswalks, more time for pedestrian crossings, and incorporating tactics such as diagonal crossings into engineering design standards. Planners

and engineers should engage communities to design what facilities work best for them. An MPO noted that their analyses of police enforcement data showed people of color experience disproportionate traffic stops or enforcement on transit and fatalities from these stops lead to the importance of tracking this data along with crash data.

Another commenter suggests the required ADA transition plan and self-evaluation process by FHWA for infrastructure in the public rights of way can be used and expanded to include transit and other transportation/mobility infrastructure connectivity to ensure safety and accessibility for underserved communities. The ADA Transition planning process includes the requirement for public outreach and input and promotes connectivity in the full path of travel.

Commenters noted that there is a need to create a more unified infrastructure and a broadband database. With a central database, the Department can define needs rather than the agencies.

10. Capturing impacts of transportation on safety and security of underserved people.

What data or data collection methods can be employed or augmented to better capture impacts of transportation on the safety and security of underserved populations, especially when people from underserved populations are walking or biking?

Active data research and progress

Roughly 10 commenters mentioned using a data tracking system for fatal crash reporting to support their safety goals. A commenter mentioned using various manual and automatic data collection tools pertaining to the travel patterns and transportation impacts faced by pedestrians and cyclists. Various technologies exist that capture and process such data, including Impact Sensors, video recordings, permanent counters, GPS, and smartphone apps.

Another commenter noted that their crash data tracks gender, age, and the driver's zip code. However, there is no good way of monitoring the specific demographic characteristics of this RFI in the crash data. They could make some decisions from the driver's license zip code or the demographics of the local conditions where the crash occurred.

When pertaining to crash date, a commenter mentioned that timely and accurate injury crash reporting is central to understanding the effects of traffic crashes on historically underserved walking or biking populations. There are two essential data sources: police records and hospital records. These records traditionally include race/ethnicity, and to a certain extent, disability status to provide more information for city staff.

Multiple commenters mentioned that, although they do track crash data, they lack pedestrian and bicycle travel data. A commenter mentioned using data that tracks bike routes and crashes in general, not just fatalities. They also collect bicycle and pedestrian metrics to better understand resident travel behavior, transportation choices, and trip assignments. This helped identify and rank the business districts with high bicycle activity, which later helped the city efficiently deploy bike parking infrastructure.

Another data tracking tool mentioned by a commenter was SafeTREC. SafeTREC tracks traffic injuries and fatalities that occur on public roads on or through tribal lands. This tool helped collect and include reservation road safety data, resulting in more complete and comprehensive safety information for tribal governments and other decision-makers. This increase in data being compiled for and reported by tribal representatives expands opportunities to tribal governments for grant funding and local partnerships to improve traffic safety within and adjacent to tribal lands.

The National Household Travel Survey was mentioned as a tool that could be adapted to collect other elements of travel behavior as well as travel experiences. Additionally, the available

variables on who is traveling could be updated to consider underserved populations and equity outcomes, allowing subsequent researchers to fully explore trip-making effects and outcomes.

A commenter mentioned that a county has developed a detailed "Level of Comfort" map for its walk and bike networks. They performed an analysis using Geographic Information System to determine the percentage of walk trips within each transit service area that are made on links that qualify as Comfortable or Somewhat Comfortable. These measures could easily be made to differentiate the quality of service to different demographic subgroups.

Suggested data research and recommendations

Several commenters (roughly 12) noted that their crash data (such as the Fatality Analysis Reporting System) needs to be improved to include crashes involving people walking, biking, and taking transit. Crash data should be able to be broken down by race, income level, and ability to help identify disproportionate impacts on underserved populations. The type of environment the crash took place in, including speed limit, number of lanes, distance between marked or signalized crossings, and presence or absence of sidewalks, crosswalks, and bike lanes, which can help pinpoint areas where safety improvements are needed. Some commenters mentioned collecting data from law enforcement, hospitals, and insurers from fatalities and near misses will lead to much better safety decision-making for underserved communities.

Another recommendation by commenters is the need for more data tracking with law enforcement ticketing, insurers from accidents, fatalities and near misses will lead to better safety decision-making for underserved communities. This data tracking could better instill equity within enforcement. Commenters also recommend that ADA data be added to these parameters.

A couple of commenters noted the importance of talking to the community directly or to create a simple comment system that allows the community to comment on areas of concern. Other commenters mentioned that an overall database of sidewalks and crosswalks is needed. Having better documentation of pedestrian walkways will help collect more user data and improve safety. With a comprehensive database, the Department should take the lead on data requirements.

11. Tools and practices that do not address equity or worsen disparities.

What assessment tools and practices are currently being used at any level of government that do not address equity or worsen disparities felt by underserved groups? What data are being used in a way that widens disparities in safety and access to transportation by traditionally underserved groups?

Commenters identified a number of measures that they believed are unhelpful or worsen disparities in access to transportations. The main issues these tools had was singularly focusing on or overvaluing personal vehicle travel, and not taking into account equity considerations. Commenters also stated that some requirements, such as how current required analyses for changes to fares and services, stop short of assessing the true impacts on underserved communities.

Two state DOTs stated that issues of travel time level of service are focused on vehicle trips to the detriment of other modes of transportation, such as walking, biking, and transit, and that this was not constructive to progress on equity issues. Three transit authorities, several transportation solutions companies, and an education institution all also commented that level of service (LOS) overweighted personal vehicle travel and does not address equity or makes disparities worse. One of these companies commented that the states of California and Hawaii have made policy changes to remove the negative policy effects of using LOS metrics. One state DOT commented that 85th percentile speed limits, and level of service calculations could all result in worsened disparities if they are focused only on vehicular transportation.

Many commenters, including a national non-profit stated that travel demand models are also unhelpful because they are too car-oriented. A letter submitted separately by a national non-profit and a team of experts argued that these models are not useful because previous forecasts are not reviewed, so it is not known if the forecasts are accurate, and that these models do not function for small geographic areas, preventing them from being able to measure destination access, which is an important measure in equity. An MPO commented that, instead of using travel time and vehicle miles traveled as metrics, as travel demand models traditionally do, trip outcome, destination access, connectivity, and other outcome-oriented measures should be used.

A national non-profit stated that FTA's current Title VI Circular requirement that transit agencies enacting a "major" change in service conduct an analysis to show the change does not have a "disparate impact" is too narrow and should be supplemented with a "prospective standard which measures the equity of a region's existing transit network and whether that network offers more equitable access over time." Another national non-profit stated that the Department needs to review the current National Environmental Policy Act (NEPA) compliance process, which it stated has many loopholes that widen disparities caused by national transportation investment.

Several commenters believed that the current use of safety statistics does not do enough to address current disparities, and more analysis is needed, and that crash data is not disaggregated by race, gender, or income level.

12. Other countries' experiences measuring transportation equity.

What are the experiences of other countries in measuring transportation equity? Please share the types and granularity of data collected, analysis methods, and policy applications.

Commenters referenced relatively few examples of measuring transportation equity in other countries. Multiple commenters stated that other countries use similar indicators and experiencing similar challenges to the United States in measuring equity in transportation.

A group of experts responding to the RFI commented that EU has started to establish and research a basic framework on equity and inclusion for member states. They further state that Australia, Great Britain, New Zealand, and the European Union all have standard project evaluation methods that incorporate equity goals, and that this gives the United States the opportunity to engage in an international dialogue on equity in transportation issues.

One state DOT commented that New Zealand shared data between Ministry of Transportation and Ministries of Social Development and Health because of the effect of transportation on well-being. The commenter further noted that the Ministry of Transportation provided financial support for people to purchase a personal vehicle when other options can't meet their transportation needs.

An educational institution commented that a World Economic Forum initiative, the Inclusivity Quotient Project, aims to implement performance indicators and clear metrics to measure equity in transportation.

A local non-profit/community organization recommended the work of the Victoria Transport Policy Institute Resource.

Another local non-profit/community organization commented that the Department should review Canada and Australia's Aboriginal participation as part of infrastructure development.

A state DOT commented that Sweden had instituted gender equity as part of transportation planning. The commenter stated that, as an example of a policy outcome from reprioritization, the country found snow clearing had prioritized the needs of men driving to work over women, who were more likely to walk and thus need sidewalk snow clearing. The commenter noted this resulted in better outcomes for individuals and society.

13. Data collection to meet equity analysis needs.

How should the Department amend the transportation data it collects to meet equity analysis needs at the necessary spatial granularity (the geographic level of detail, i.e., national, state, local)? Since most of the Department's funding is not directed at individuals, what is the appropriate level of spatial granularity to accurately evaluate the impact of transportation investments on underserved communities?

Commenters generally coalesced around two sometimes intersecting themes about how to meet these needs at the appropriate level of spatial granularity. On one hand, many commenters expressed a desire for data to be collected at as high a level of detail as possible, preferably at the census tract level if not below. On the other, commenters also frequently noted that the right level of granularity depends on the context, with broader groupings being the best fit in some cases and high-granularity data collection allowing for flexibility in terms of aggregation if needed.

Numerous commenters including state DOTs, MPOs, transit authorities, a think tank, and an association advocated for high spatial granularity for at least some data, citing considerations such as the need to measure impacts which may vary substantially at small-scale levels and to allow state and regional agencies to make local decisions. Commenters seeking high granularity varied in terms of the unit recommended, with many, including a state DOT, a transit authority, consulting or transportation solutions companies, a local non-profit/community organization, and an advocacy organization recommending census tracts, census block groups, or census blocks. Commenters noted that some types of projects are best suited to extremely fine-grained data; for example, a state DOT said that block-level data is helpful to identify specific over-burdened communities; an association said that data for projects involving pedestrian or bicycle access should be highly granular, and a transit authority stated that more granular data allows agencies to be more inclusive in the languages it uses for data collection, as it makes it easier to apply of the Department's "safe harbor" guidance on translation without implicating American Community Survey (ACS) language consolidation requirements. Several of the commenters seeking more granular data collection addressed the need to protect against potential privacy and confidentiality impacts.

Commenters such as a state DOT and an association noted different factors which may influence the appropriate scale for data, such as project type, urban vs. rural setting, and geographic region. Another state DOT advocated for data at a range of different levels in different contexts, including reporting of performance related to state plans and MPO-level plans at the state and MPO levels, with state planning and programming activities traced at the county level and grants or other individual projects traced by census tract or similar level. In addition, some commenters, such as state DOTs and transit authorities discussed circumstances in which the benefits associated with particular systems or projects may not be centered on their immediate location, with investments in public transit systems being a frequently cited example. A MPO

recommended that the Department's decisions regarding spatial granularity take into account both individual-level and population-level focuses to reflect that spirit of federal civil rights and environmental justice requirements. Commenters such as a state DOT, a transit authority, and an MPO asked the Department to provide guidance regarding collection and analysis.

Some commenters such as a transit authority noted that collecting data at higher levels of detail allows for more flexibility in conducting analyses at appropriate levels. An association stated that it is easier and more accurate to aggregate spatial data when necessary than to disaggregate it. One consulting or transportation solutions company noted the need for analysis to be conducted at a variety of geographic and/or demographic "zoom levels" in order to properly compare self-identified cohorts to peer groups, while another stated that collecting disaggregated data that can be examined at larger scales if necessary ensures that nuance is not lost to premature aggregation.

More than one DOT stressed that the Department should make more effort to capture data reflecting equity concerns. Several commenters noted the importance of collecting information for types of transportation other than cars, including walking, bicycles, public transit, and ride sharing or scooters. Several commenters requested that the Department expand the data it collects to reflect underserved populations not currently captured in widely used surveys, such as the LGBTQIA+ community, individuals who are Limited English Proficient, and rural households without cars.

Specific recommendations included the following:

- One state DOT recommended use of aggregated General Transit Feed Specification (GTFS) data to develop and monitor granular public transit outcomes in underserved communities, while another recommended National Highway Traffic Safety Administration and U.S. Census "Journey to Work" datasets to estimate groups benefitting from investments.
- A state DOT noted that, with granularity of place-based demographic data, there is often a tradeoff between the spatial level of aggregation and the frequency of data collection.
- An educational institution noted a range of concerns regarding the failure of household travel surveys to sufficiently account for members of underserved populations.
- Several MPOs cited transportation improvement programs (TIPs) as a good starting point for analyzing or reporting equity data.
- A think tank recommended that the Department expand collection of transportation behavior data and related built environment data, as well as collaborate with other agencies to allow complementary datasets to interconnect so it can take advantage of data tracking subjects such as small business locations or environmental quality inputs.
- An educational institution recommended that the Department clearly identify and define aggregation criteria and assumptions rather than considering underserved populations as a whole.

- Expert commenters cited the work of Raj Chetty and Sustainable Transportation Indicators Subcommittee, Transportation Research Board, *Sustainable Transportation Indicators: A Recommended Program to Define a Standard Set of Indicators for Sustainable Transportation Planning* (November 2008).

14. Department actions for more useful data for equity research and analysis.

What actions can the Department take with its data to make it more useful for equity research and analysis?

Many commenters responded to this question by recommending that the Department work to develop data standards, and many of these recommended this be done in collaboration with other organizations. Commenters recommended the Department make its data easily available, and that geospatial data a relatively granular level is most useful. Commenters also recommend the Department provide tools to make the data more easily available tools be provided to more easily understand the data, and that the data be shared with organizations.

Several commenters recommended working with other organizations to develop data standards. a state DOT commented that the Department should work with industry organizations like the American Association of State Highway and Transportation Officials (AASHTO), National Association of Regional Councils (NARC), and Association of Metropolitan Planning Organizations (AMPO) to develop a data collection framework and data standards that work for their stakeholders. A group of experts responding to the RFI recommended working with transportation professional organizations like the Institute of Transportation Engineers (ITE), the American Public Transportation Association (APTA), and AASHTO as well as international organizations such as OECD, the World Bank, and the European Union to establish transportation data quality standards.

A number of commenters recommended the Department work to make data more accessible to other organizations. A transit authority stated that the Department could create a central repository that contains data down to a specific geographic level that can be analyzed by the public. A state DOT commented that the Department could function as a clearinghouse and resource for transit agencies and could also make data available by providing Streetlight for every state DOT. Another state DOT recommended the Department make all geo-spatially oriented data readily available to states in multiple formats, including mapping layers, down to the census tract or similar level.

A company commented that the Department should provide data as an open source that can be used, checked, added to, or commented on by outside researchers. A state DOT asked for the Department to make all geospatially-oriented data readily available to states in multiple formats, including mapping layers, down to the census tract or similar level, and added the equity analysis specifically requires. A company commented that the department should provide nation-wide census tract level data, and that such a standardized, curated dataset help private sector actors aid equity goals.

Many commenters stated that providing tools to better understand data would be beneficial. An educational institution commented that just making data open doesn’t make it accessible,

available, or easily understood. The commenter stated that the Department needed to work hard on making the data more accessible, and recommended the organization take a proactive approach to working with other agencies provide equity related layer data with their mapping tools. A transportation-related company stated that the Department should make the data accessible through a tool that incorporates best practices and is useable by non-technical users. A transit authority commented that the Department could make a tool An MPO recommended that the Department add a demographic component to existing tools by breaking out metrics by demographic groups and provide the ability to overlay demographic data on interactive maps. Another MPO recommended the Department provide a common methodology for assigning demographics to transit and transportation data using ACS data or another commonly accessible data source.

15. Data for tracking people in historically underserved groups over time.

What data exist that track people in historically underserved groups over time (i.e., panel surveys) that may be useful to evaluating transportation equity? What metadata is useful in determining that a data collection effort is equitable (e.g., demographic profile of the researchers, method of questionnaire administration, language of questionnaire)? What methods or data would be useful in addressing nonresponse bias in equity data collection?

Commenters pointed to a lack of data that tracks historically underserved groups over time as a problem, and that there are a number of difficulties in transit systems conducting panel surveys.

A state DOT recommended the Environmental Justice Screen, data from data warehouses, and panel surveys as ways to track historically underserved communities over time. A transit authority recommended focus groups and the use of longitudinal data over time and noted this would require careful selection and monitoring by an academic or consulting group. Commenters including a state DOT recommended census data such as American Community Survey and Public Use Microdata Samples (PUMS), though commented that this may not be frequent enough to identify short-term trends. A commenter recommended Bureau of Labor Statistics (BLS) to measure change in job function and union density but commented that this data may lack the level of specificity necessary to identify transit occupation. A transit authority recommended the use of MPO Regional Plans, Longitudinal Employer-Household Dynamics, and University of Richmond's Mapping Inequality Project.

Many commenters commented that non-response to surveys is a problem for gathering this data and recommended that the Department must do a better job reaching out to those communities in a consistent and sustained way. This is particularly a problem in non-English speaking or multilingual communities. Commenters recommended partnership and sustained engagement with these communities and groups operating within these communities, and engaging interpretation services to combat non-response. A transit authority recommended reaching out through social media, multi-lingual newspapers, and direct mailing to community-based organizations (CBOs), and in designing surveys to be accessible by avoiding jargon and providing the necessary response-support. Another transit authority also commented that ensures these communities are engaged in its surveys it makes sure survey questions are easily understood, providing survey in multiple languages, and weighting survey data for representation of total ridership.

Other commenters recommend methodological ways the Department can deal with non-response. An association stated that it provides a second, much shorter survey to individuals who refuse to take its longer survey. A state DOT recommended that

DOT include non-responses in a separate category and include it in the data to attempt to understand the reason for non-response, and that the Department should over-sample targeted populations.

An MPO commented that useful metadata could include method of survey distribution, availability of surveys in non-English languages, percent of surveys returned in non-English languages, sampling strategy, use on online version of the survey, location of survey distribution, and type of survey distribution. A state DOT commented that it could be useful for metadata to reveal the priority assessment of the community from which it was collected and that perhaps a reference URL to the scoring methodology would be helpful.

16. Analyzing the effects of negative environmental outcomes on underserved populations.

Transportation plays a large role in localized pollution and negative environmental outcomes for those living near certain transportation routes and facilities. These negative environmental outcomes can have disproportionately high and adverse effects on underserved populations. How can the Department better analyze these effects, what are the data gaps, and what data sources can help address this problem? For example, what data are needed to measure the impact of vehicle electrification on the shift from mobile-source emissions to point-source (e.g., power plant) emissions on disadvantaged populations?

Many commenters recommended the Department partner with other agencies with expertise to work more effectively on the issue of the adverse effects of transportation emissions, and that the Department could take a leadership role by providing information and procedures or by facilitating cooperation between environmental and transportation agencies.

Several commenters, including a state DOT, recommended that the Department partner with the EPA and state-level environmental agencies to access their data, tools, and expertise, and that state-level environmental agencies are the best positioned to understand air quality issues in their own state. These commenters stated that the Department should not merely concentrate on environmental data around highway transportation and transit, but should also examine the environmental impacts of port, rail, and air infrastructure. An association noted that state DOTs and MPOs have experience with travel and emissions models, and already use these models to locate areas that have impacts from these projects and to find where these impacts may be disproportionate. The commenter noted that these models would complement community air monitoring programs overseen by environmental agencies, and recommended the Department provide training and guidance to transportation agencies on how to effectively work with environmental agencies to engage with underserved communities on an ongoing basis. An MPO commented that the Department can start analyzing the amount of particulate matter released by mode per project.

A national non-profit commented that it would be helpful for the Department to invest in air pollution monitoring systems to better capture the impacts of transportation projects and routes to monitor air quality to better understand the impact of emissions on these communities. A company commented that the Department should fund collection through of data through investments in air quality monitoring, overlay circulation patterns, and make this data publicly available through a map-based tool.

A state DOT commented that the Department should provide general and widely available procedures for estimating emissions from mobile-source and point-source emissions.

Another state DOT recommended EJ Screen as a good place to start for environmental indicators. A transit authority recommended the CalEnviroScreen created by the California Office of Environmental Health Hazard Assessment (OEHHA) for understanding the impact of transportation facilities on health outcomes to those who live and work near these projects. An association recommended TRB Committee on Transportation and Public Health (AME70) as a resource on these issues.

An association stated that the Department should consider revising the Congestion Mitigation and Air Quality Improvement (CMAQ) Program guidance to account for effects over time, including long-term changes to better capture the impact of emissions on low-income communities.

A transportation solution company recommended using vehicle schedules to determine vehicle frequency and pathing locations, and to cross-reference that with pollution monitors to track the effects of smog when electric vehicles are running.

17. Data requirements for modeling equity outcomes.

What data are required to model equity outcomes at the individual person level? How can the Department gather this information while protecting personal privacy?

Commenters suggested a number of possible sources for such data, while other commenters were skeptical this is the correct approach.

Some commenters recommended the use of census data. An MPO commented that some equity outcomes can be modeled with Activity-Based Travel Demand Models, which typically use g Public Use Microsample (PUMS) data collected by the Census Bureau. Another MPO noted that activity-based travel demand models use block-level Census demographic data to create synthetic individual population and household projections.

A number of commenters, including a state DOT, advocated a task-based or destination-based approach to this form of modelling. Several commenters would require more information on the destinations of trips. An association recommended using AASHTO's Census Transportation Planning Products (CTPP) as the best source of this data that does not compromise personal privacy. A transit authority stated that information be gathered on destination, trip path, location of person's home, and demographic, and that this information be collected across a large population of persons, aggregated, and anonymized.

A commenter recommended the work of Raj Chetty with the IRS as well as educational data from the Department of Education as potentially useful.

A number of commenters expressed reservations or recommended against modeling equity outcomes at the individual level. These commenters did not think that modeling outcomes at the individual level would be useful, believed that there was not an adequate mechanism for maintaining privacy and security.

Commenters stressed the importance of ensuring privacy. An MPO recommended that data collection be performed by a contractor that specializes in this work, so the Department never receives personally identifiable information. A commenter noted U.S. Census Bureau's solution, which is only to make this data available through Research Data Centers and requiring a research proposal and lengthy process to access this data. A state DOT commented that, if the Department attempts to conduct this type of data collection, it should incorporate significant protection against federal and state open records laws into the regulation.

18. Ensuring underserved populations are represented in data collection efforts.

What are approaches that DOT can take to ensure that individuals from underserved populations are represented in our data collection efforts?

Commenters generally stressed similar themes, including the need to actively engage members of underrepresented communities, design data collection efforts that accurately reflect the experiences and perspectives of individuals from these groups, and take steps to encourage higher participation in surveys and other data collection efforts.

Numerous commenters, including state and local agencies and nonprofits, identified specific ways to actively engage with communities representing underserved populations, with frequently cited recommendations including partnering with respected community organizations, participating in outreach and trust-building efforts, and ensuring that those involved in the data collection and outreach process represent communities being targeted. An MPO stated that working with community organizations may be helpful in boosting a survey's legitimacy for underserved populations and cautioned that setting up relationships with such groups should be established prior to any data collection efforts. A national/international nonprofit stated that notification of proposed projects or activities and associated permitting processes should use a range of communication methods tailored to the affected communities. A state DOT recommended actions including prioritizing safety improvements within current and historically disadvantaged communities and promoting infrastructure design that enhances safety for users of modes of transportation other than driving.

Many commenters recognized the need to ensure that data collection efforts accurately represent individuals from underrepresented populations and correct for potential bias introduced by their data sources. Specific recommendations made by multiple commenters, including state DOTs, a transit authority, an MPO, and a trade organization/association, include oversampling of individuals from such populations or weighting their responses to counteract factors that may limit response rates or otherwise make it harder to gather such data, paying attention to the potential biases and other limitations built into the data sources used and working to balance them, and supplementing quantitative data with qualitative data to provide a fuller picture.

Commenters were divided on whether information generated through newer data collection methods such as geolocation or crowdsourcing does more to help or hinder representation amount underrepresented populations. Several corporate commenters with experience in tracking data from smart phones and shared scooters highlighted the potential of these sources in providing more equitable data collection opportunities, while a metropolitan agency stated that data from private companies can provide a more granular level of data than previously available. However, many commenters urged caution in using data from such sources without accounting for their limitations. Several transportation agencies pointed out that data derived from cellular networks, smart phone use, or credit card purchases are unlikely to adequately represent low-

income individuals, as well as other underserved groups such as elderly or rural individuals. A commenter representing a research institution recommended that The Department only procure data from commercial sources that are willing to be transparent about their user base and that it interrogate the calibration and validation processes of emerging data sources, while a MPO stressed the need to understand the collection process for such data, including data quality, potential groups left out, and extent to which it can be broken out to reflect demographic groups of interest.

One local nonprofit/community organization recommended a range of tools and resources, including:

- University of Minnesota Accessibility Observatory reports that track accessibility to jobs across multiple transit modes.
- Remix, Conveyal, or other transit planning software which can calculate transit access-to-opportunity measures from a single geographic location.
- Resources to help check for diversity and inclusion among census tracts affected by a project or within a network of access, including University of Wisconsin Population Health Institute County Health Rankings & Roadmaps data on neighborhood residential segregation and TransitCenter Equity Dashboard, which provides maps and data on transit equity in range of major U.S. cities.
- Measurement of "access to frequent transit," or the number of households within half a mile of a transit route arriving every 15 minutes.

Other specific advice on tools and methodologies include a state DOT recommendation to track responses at the neighborhood level to achieve a greater understanding of which areas and populations were reached; an educational institution recommendation to seek out the examples of the Netherlands' data collection efforts in preparation for full autonomy of its transportation infrastructure, as well as data collection efforts around the General Transit Feed Specification (GTFS); a recommendation from a state DOT to consider using tools beyond "Areas of Persistent Poverty" as a standard because the criteria exclude many poor neighborhoods surrounded by wealthier neighborhoods; and a nonprofit suggestion to identify potential low-income communities or communities of color than may be affected by transportation programs/projects through methods going beyond using the Environmental Protection Agency's EJSCREEN program or other tools that rely on census data. One MPO recommended that the Department provide research and guidance on how surveys should word questions on self-identifying as a member of an underserved population, stating that this could help maximize accuracy and completeness of response and utility for disaggregated analysis.

Commenters identified a variety of avenues for boosting participation of individuals representing underserved populations in data collection efforts. Frequently recommended methods include using multiple collection formats for survey results, with one MPO recommending methods including smartphone apps, websites, call centers, and personal interviews; ensuring that meetings and other outreach opportunities are at a convenient place and time, considering

financial incentives for participation, conducting surveys at locations where members of targeted communities are likely to be, and using translators or interpreters to reach participants who would otherwise face language barriers. One association recommended providing a much briefer second survey to individuals who refused to take its original assessment, then using the information gathered to help evaluate populations less likely to respond to surveys.

Several commenters also noted concerns related to ensuring that particular groups and perspectives are adequately represented. Several commentors identified a need to ensure that tribal communities have access to participation in data collection efforts, while other comments cited individuals in the disability community, families with small children, and those who rely on transportation methods other than driving. In addition, several commenters noted that members of immigrant communities may be especially wary of providing information about themselves or interacting with government representatives.

Other concerns identified by multiple commenters include transparency and privacy. In raising these issues, commenters such as an MPO and several educational institutions noted the need to be clear about what data is being collected, how it will be used and who benefits, and who else will have access, as well as what steps will be taken to protect privacy.

19. Developing a data collection framework.

How should the Department develop a data collection framework, gather new and existing data, set data standards, and analyze and aggregate it into useful information for policymaking?

Commenters identified a number of suggestions for how the Department should address data related to equity issues, touching on a variety of topics including establishment of centralized data infrastructure, development and adoption of uniform standards, best practices for conducting data analysis, and specific concerns about the limitations of existing data or new types of sources that would be valuable to collect.

Multiple commenters expressed the need for the Department to create a clearinghouse or repository for transportation data that stakeholders could access. A MPO recommended a repository that transportation agencies at all levels would have to report to on an annual basis. A related suggestion, also frequently made by commenters, was for the Department to set up a public portal or dashboard for monitoring and reporting equity-related transit data. One association provided the Federal Highway Administration's National Performance Management Research Data Set (NPMRDS) as an example of a similar dashboard. Other commenters cited the example of data portals, such as NYC Open Data, which not only make the data accessible for public consumption, but curate it and tell data stories to offer context. A think tank commenter suggested additional federal government roles in building a more robust data infrastructure, recommending that federal agencies such as the Department establish infrastructure asset inventories and that a central Federal Data Reserve be established to manage governmentwide data operation standards.

Another major theme in commenter responses was a desire for the Department to play a role in development of more established standards for data relevant to transportation equity, citing issues such as the inconsistency of equity testing frameworks used by local agencies and the need for national-level guidance, the lack of consistent definitions and sources of demographic data, and the need for data collection standards and interchange formats to make it easier for agencies and vendors to communicate and exchange data. Multiple commenters, including a state DOT and a MPO, raised the issue of metadata, stating that data sources should be required to include sufficient metadata, such as relevant dates, source information, and intended lifecycle. Several commenters, such as state DOTs and a consulting or transportation solutions company said the Department should promote adoption of standards developed via a more organic process rather than taking a top-down approach. One widely popular standard cited by multiple commenters is the General Transit Feed Specification (GTFS) for sharing public transit data; some of these commenters specifically called for the Department to support its broader adoption. Other standards and data frameworks cited include MobilityData, Transitland, the TCRP G-18 research project, the University of Wisconsin Public Health Institute County Health Rankings and Roadmaps, and a framework developed by Caltrans' Enterprise Data Governance Task

Force. A transit authority recommended that the Department reach out to transit agencies, state and local DOTs, and other transportation providers to identify useful and commonly collected data before beginning to develop standards. A consulting or transportation solutions company recommended that data practices incorporate the Fair Open Data Principles, which require data to be findable, accessible, interoperable, and reusable, while a trade organization recommended that the agency apply the American Association of State Highway and Transportation Officials (AASHTO) core data principles, which mandate that data must be valuable, available, reliable, authorized, clear, efficient, and accountable.

Commenters including a state DOT and a transit authority identified steps the Department should take when planning data collection and analysis projects, such as seeking stakeholder engagement, developing goals, identifying readily available data as well as gaps, and setting priorities that should be driven by the advancement of equity, and establishing relevant benchmarks. Commenters, including a transit authority and a consulting or transportation solutions company, provided several recommendations for equitable data collection, including increasing the categorical options and breadth of variables, such as gender; diversifying research methods; ensuring language accessibility; leveraging a variety of communications means; and using inclusive and common language when possible. A transit authority recommended a data collection approach that includes both quantitative and qualitative data, with data elements that enable analyses along equity dimensions in a disaggregated way. An MPO recommended using results-based accountability and performance-based funding principles as a framework for applying data to transportation-based decisions. A consulting or transportation solutions company suggested that the Department consider requesting racial equity impact assessments when assessing grant awards. A state DOT highlighted equity-focused transportation assessment tools it had developed, such as a system to identify priority pedestrian locations, with potential to be scaled nationally.

Many commenters also highlighted specific data issues and opportunities for development of new data sources that would help fill gaps. For example, a state DOT identified comprehensive bicycle and pedestrian data as an unmet need, while a consulting or transportation solutions company stated that more complete and readily available data on historical roadway speeds and data on access for people with mobility disabilities would be useful. A think tank suggested additional attention to measuring the environmental impacts of the Department investments and programs and to benchmarking workforce, household, and small business prosperity. An MPO shared concerns about the data underlying numerous current equity analyses, noting that the American Community Survey (ACS) data, which is widely used for such purposes, often has large margins of error depending on the geography level used and the demographics of the population in those areas. Data challenges noted by commenters include limitations associated with calculating unmet public transportation needs, difficulties in predicting future demographic patterns in urban areas with high levels of gentrification and displacement, the question of how best to capture transportation activity that crosses jurisdictional boundaries, and the need to be

aware of equity issues on both the individual and group/geography levels. One commenter cited the discussion of emerging data sources in Tomer, A., and Shivaram, R., Modernizing Government's Approach to Transportation and Land Use Data: Challenges and Opportunities. Washington, DC: The Brookings Institution, 2017.

Finally, several entities focused on how the Department might work to boost capacity at the state or local levels. A state DOT recommended that the Department encourage states to build out data analysis capabilities, promote peer-to-peer exchanges to spread best practices, and consider providing further incentives for data analysis by allocating a specific share of program funds to these activities. A commenter from an educational institution advised the Department to disseminate data to state and local decisionmakers via means such as dashboards, webinars, or workshops.

20. Engaging industry on collecting data for evaluating distributional effects of safety technologies in vehicles.

How should the Department engage industry on gathering more detailed data on advanced safety features in vehicles for evaluating if technologies and their benefits are disproportionately distributed among different income and demographic groups and whether such technologies have equitable predictive performance to improve safety for all citizens?

An educational and research institution commented that studies show that traffic crash fatalities disproportionately affect Black, Indigenous, and People of Color. To illustrate this, in the last decade, Black pedestrians were 82 percent more likely to be hit by drivers than white pedestrians. Any evaluation of future vehicle technology should make these longstanding inequities a primary consideration. Vehicle manufacturers should be responsible for measuring driver distraction caused by in-vehicle systems and publish statements about likely equity impacts of new vehicle technology.

An advocacy organization noted that safety technologies that are only offered to the public as part of premium options discriminate against people with lower incomes, creating disproportional impact on lower income motorists and their communities.

Emerging Automatic Driving Systems (ADS) and Automated Driver Assistance Systems (ADAS) may rely on Artificial Intelligence (AI) for routine operations as well as safety- specific features. AI may reflect gender and racial biases of its developers and data input. Vehicles including ADS/ADAS must acknowledge people with speech difficulties and the wide variety of languages, accents, and dialects spoken by Americans. Avoidance detection systems must be robust and reliable with respect to human presence to include pedestrians, people using wheelchairs/walkers, cyclists, etc.

Recall completion rates remain poor, particularly in the older vehicles relied upon by many in disadvantaged populations, and better notifications in addition to other potential improvements to the recall program remain necessary.

An MPO recommended that the Department compel automobile makers to report crash locations in safety testing, allowing for analysis to determine if testing is being concentrated in regionally representative locations, and ensure that vehicle crash test regulations are equitable, especially in regard to gender and age.

A non-profit organization stated that, because low-income people usually purchase used vehicles, the performance of safety technologies in aging vehicles are likely of interest to both perspectives. Research groups should focus on equity among various groups to address biases in aging technologies, such as algorithms in technologies that mistake people with dark skin or are unable to detect dark skin. These issues may also extend to other groups in transportation, such as the disabled.

With respect to used vehicle purchases and advanced safety features, two issues related to advanced safety features in used vehicles is proper training in system usage, and how the advanced safety systems in aging vehicles perform. Used vehicle owners less often have a relationship with the vehicle manufacturer.

A trade organization commented that AVs represent an opportunity to reduce crashes that are due to human error, including reckless, impaired, and distracted driving. Those crashes, and the injuries and deaths they cause, are not evenly distributed across economic and racial groups. There are significant differences in traffic and pedestrian deaths by race and ethnicity, with deaths among American Indian and Black populations higher than the national average.

AVs can provide vital connections to transit deserts, which could result in upward mobility. AVs also have the potential to shrink or eliminate gaps in transportation access by improving integration with mass transit, whether by providing both first mile/last mile connections to transit.

AVs have the potential to allow senior citizens and people with disabilities greater freedom to move about the world on their own schedule. AVs can also be a useful tool in rural communities, which face many of the same problems as urban and suburban ones, with the added issue of individuals often having to travel much farther to take care of their needs.

A group of experts commented that the Department should address this challenge by focusing on people first and less on vehicles, which would exacerbate the concern described above. Crash data should generally be reported per capita (e.g., per 100,000 residents). Currently, it is often reported using distance-based units (e.g., crashes per 10,000 ADT or per 100 million vehicle-miles) which ignores the additional crashes caused by increases in vehicle travel and the safety benefits of VMT reduction strategies.

21. Engaging industry to increase data available on electric vehicles and vehicle hybridization.

How should the Department engage industry to increase the data available to understand electric vehicles and vehicle hybridization with the intent of understanding how these technologies can benefit different income and demographic groups; and to improve the distribution and fairness in the use of these technologies for all citizens?

One industry expert contends that data availability on electric vehicles adoption can be crucial in terms of projecting future adoption rates and equitable planning for charging station siting. Surveys and pilot projects should be funded to collect representative data for electric vehicle mileage and spatially heterogeneous electricity costs, as well as home, workplace, and public time-of-day charging profiles. To achieve an equitable transportation electrification transition, they encourage funding a national roadmap study that will determine optimal pathways to equitable access to electrified mobility systems.

An MPO stated that electric vehicles and vehicle hybridization can benefit different income and demographic groups in different ways. Individuals that have sufficient income, appropriate commuting patterns, and housing with dedicated off-street parking where they can install charging infrastructure are clearly best positioned to be able to benefit from the reduced fuel costs of electric vehicles. In addition, the communities through which these vehicles travel during commutes will also benefit from reduced tailpipe emissions.

This commenter goes on to state that replacing diesel, diesel hybrid, natural gas, or propane transit buses with all-electric transit buses will reduce or eliminate tailpipe emissions from transit school buses. Because these buses often travel through lower-income neighborhoods and provide mobility to lower income and other underserved individuals and communities, this elimination of tailpipe emissions should allow the benefits of the electrification of transportation to accrue in these communities.

Major cities with growing traffic congestion and housing shortage and affordability issues are facing a very different set of challenges than rural areas struggling with poor connectivity and access to multimodal options.

A state DOT would like to explore the benefits and tradeoffs of adopting connected and automated vehicles (CAV) for essential vehicle fleets, such as retrofitting infrastructure. They would also like to expand research to better understand impacts of CAVs on personal mobility, freight mobility, transportation system performance, land use, and emergency response. This DOT encourages expanding cross-agency coordination and collaboration at the state, regional, and local level, as well as with neighboring states to ensure smooth operation and deployment of CAV technologies.

States should be aware that vehicle cybersecurity is increasingly important to be aware of and to engage industry to meet with appropriate regulations and guidelines for developers and automakers. These potential security threats should be considered when developing infrastructure and maintenance requirements for CAVs.

An education institution is concerned that, typically, new types of amenities are first introduced in affluent neighborhoods. For example, many cities have started pilot testing electric buses because they are quieter, have lower maintenance costs, and produce significantly lower greenhouse gas emissions. Meanwhile as a result of historically inequitable planning processes, people with lower incomes tend to suffer more from health conditions caused by air pollution. It is important that electric bus deployment be prioritized first in neighborhoods with the unhealthiest air quality in order to mitigate these harmful impacts.

A state DOT recommended establishing a standardized reporting for vehicle sales to be able to characterize where these vehicles are and are not being sold. Equity in access to new vehicles will be a function of income. The Department could facilitate the distribution of zip-code-level passenger vehicle registrations to understand better the distribution of vehicles in specific communities of interest, including understanding deployments by community-level income. In addition, these data could help to inform which types of vehicles are most prevalent in given neighborhoods and provide information on where polluting vehicles persist. Increasing the availability of granular detail about which parts of a state or city have more clean vehicles deployed, their use cases, and where they operate within urban environments can allow locales to quantify localized benefits better.

On the private side, they would like to explore avenues to work with the various providers, such as Uber and Lyft, to electrify their fleets and help map where electrification benefits are accruing.

22. Programs for diversifying the transportation workforce.

What high-quality career pathways programs or educational pipelines have state and local governments utilized or implemented to diversify their transportation workforce? What have the results been? How were the results of the programs measured?

Education and career pipelines

The majority of commenters (roughly 23) agreed that in-house or outsourced skill-based education programs and career pipelines are beneficial to diversifying the transportation workforce. Some of these educational programs include mentor partnerships, internship/apprenticeships, and training programs. These programs allow for direct career pipelines that guide employees towards a career in the transportation industry.

Commenters mentioned that community involvement is important for building exposure to the transportation industry. Some commenters support this exposure by implementing low-to-no-cost education classes within the local community and school systems. Implementation includes K-12 establishments, college and university level education, local trade schools, and apprenticeships. Education establishments also work with their Diversity and Inclusion offices to reach a diverse student base.

An MPO recommended hiring more talent from Historically Black Colleges and Universities and diverse professional organizations to diversify the candidate pool.

A national non-profit recommended issuing training grants to organizations that can provide a meaningful level of industry-focused training to increase career pathways and educational pipelines.

Another comment recommendation was making diversity, equity, and inclusion into company standards. Commenters noted the need to use meaningful, strategic, and culturally specific communication methods to build sustainable community relationships. By utilizing pro-equity centered perspectives, the Department can effectively market new job openings to attract diverse talent.

A consulting company stated that, although companies have provided outreach events, training programs, and mentor/apprenticeship programs, most companies only specify Minority, Women, and Disadvantaged Business Enterprise (M/WDBE) goals and score M/WDBE work and execution plans when requested, which is not regularly enough to have a meaningful outcome. Some commenters mentioned that they do not have any pathways or that they are building them.

The following commenters mentioned supporting a company's process in building diversity:

- Transportation Learning Center (TLC)
- HIRE360

- Steer
- Latinos In Transit
- Transportation for America
- California Association for Coordinated Transportation

The following commenters mentioned having an outreach program or community involvement in place for their workforces:

- Southern California Regional Rail Authority (SCRRA)
- Kansas Department of Transportation
- Louisiana Department of Transportation and Development
- NY Metropolitan Transportation
- Mid-Ohio Regional Planning
- Massachusetts Department of Transportation
- Metro Regional Transit Authority
- Maryland Transit Administration
- California Department of Transportation
- Greater Cleveland Regional Transit Authority
- Washington State Department of Transportation
- Chicago Transit Authority
- Los Angeles County Metropolitan
- San Francisco Municipal
- Minnesota Department of Transportation
- Oregon Department of Transportation
- Transport Workers Union of America (TWU)
- King County Metro Transit
- Washington Metropolitan Area Transit Authority
- San Francisco Bay Area Rapid Transit (BART)
- California Association for Coordinated Transportation

The following education establishments commented on direct connection:

- Portland State University, Transportation Research and Education Center
- University of Texas Health Science Center and Houston School of Public Health

23. Practices for increasing diversity and retaining individuals from underserved populations.

What practices has the transportation industry taken to increase diversity and retain individuals from underserved populations within its workforce? How should the Department measure the overall impacts, especially the diversity impacts, on the workforce through Federal funding, policies, and programs?

Practices that increase and retain diversity

Roughly 10 commenters mentioned the need to create a more quantitative and reliable system for monitoring diversity in the workforce. With more detailed data, grant funding can be better allocated to fit the need. A commenter noted that the federal government could also provide grants and tax incentives to educational institutions and businesses that hire and train individuals from underserved populations to improve diversity within the transportation industry. A condition of the grant/incentive could be the required retention of the participants in the program and participants' full development through a structured program that offers a pipeline to a careered position or a recognized degree or certification.

Both transit agencies and companies commented that many are adding and maintaining diversity, equity, and inclusion standards and definitions. Having DEI standards and in-house DEI training has helped attrition and further educate employees. Mentorship programs and continued education in the transportation field can support early, repeated opportunities for career exploration.

A transit authority commented that they could look for ways to better their services and reach communities efficiently by having inclusive conversations.

Some commenters stated that they have active community outreach in minority communities and resources to connect with local universities and trade schools. Using education and career-based incentives like a free trade school or helping obtain a driver's license and CDL license can help break down some socioeconomic barriers when attracting a diverse community.

24. Tools for augmenting minority and disadvantaged business programs.

What tools and best practices might the Department utilize to augment minority and disadvantaged business programs to create pathways for jobs in the transportation industry, and jobs of the future?

Disadvantaged Business Program insight

Comments on Disadvantaged Business Programs (DBE) mentioned that agencies using DBE programs helped more disadvantaged businesses obtain agency contracts and supported the minority community. Another commenter noted that DBE programs could remedy ongoing or past discrimination and have helped provide a fair opportunity to compete for transportation contracts. Another comment on small business development stated that offering business incentives that help train/mentor employees and community outreach in areas of disadvantaged business help grow. Commenters also suggested the Department actively contract with more businesses owned by women, veterans, and people of color. Another area of improvement commented on was the process for DBE eligibility and registration. Updating the requirements and creating a more accessible registration process can help applicable businesses better enter the system.

Gender diversity and data collection

Several commenters brought up the unfair representation women have in the transportation agencies. These commenters stated that a lack of equity between male and female compensation and treatment leads to low gender diversity in the field.

Multiple commenters mentioned the need for creating a more quantitative and reliable method or system for monitoring diversity in the transportation workforce. Agencies are seeking input on data and assessment tools and best practices. Commenters note that some third-party and minority data firms misrepresent diversity data contributing to misinformation and the need for a more consistent and reliable method. Improving the data and assessment tools will strengthen the pipeline to workforce connection to more minorities, women, people of color, people with disabilities, and other underserved populations.

25. Measuring the success of workforce programs.

What type of data should we collect to measure the success of workforce programs? How do we assess if we are placing underserved populations in these job programs and into jobs; how do we track retention rates and opportunities for advancement; and how do we assess whether these are good-paying jobs?

Most commenters referenced the need for a standardized system for tracking employee demographic data, including race/ethnicity, gender, and ability. Other commenters recommended collecting data on applicant demographics, employee turnover, and retention, identifiers such as veteran status, disability, and acquisition of skills from the start of employment.

Commenters also mentioned the need to collect comparative data for all demographic categories, including percentages of individuals from underserved communities or lower socioeconomic status, not just ethnicity. Commenters noted that this data would help with the overall diversification of the workforce when implemented meaningfully.

Commenters recommended using in-house HR-based programs that track demographic analytics and using third-party systems to track data. Commenters agreed that more research is needed to find the most accurate, efficient, and consistent data collection standards and processes, and that this data should be updated, collected, and regularly reviewed.

The following commenters mentioned actively using a system that tracks employee data:

- Southern California Regional Rail Authority (SCRRA)
- Kansas Department of Transportation
- Pennsylvania Department of Transportation
- NY Metropolitan Transportation Authority (MTA)
- Massachusetts Department of Transportation
- Metro Regional Transit Authority
- California Department of Transportation, Office of Race and Equity
- Washington State Department of Transportation
- Chicago Transit Authority
- Los Angeles County Metropolitan Transportation Authority
- San Francisco Bay Area Rapid Transit (BART)
- California Association for Coordinated Transportation

Comment Categorization Table

The following table illustrates how commenters were categorized for the purpose of this summary document. It does not represent all comments received in response to the RFI.

Docket ID	Commenter Name	Commenter Type
Associations		
DOT-OST-2021-0056-0254	Alliance for Automotive Innovation	Trade Organization/Association
DOT-OST-2021-0056-0012 & DOT-OST-2021-0056-0235	American Association of State Highway and Transportation Officials (AASHTO)	Trade Organization/Association
DOT-OST-2021-0056-0304	California Association for Coordinated Transportation	Trade Organization/Association
DOT-OST-2021-0056-0191	Coalition of Capacity Building Organizations	Trade Organization/Association
DOT-OST-2021-0056-0300	Council of Black Architecture and Engineering Companies	Trade Organization/Association
DOT-OST-2021-0056-0110	International Parking & Mobility Institute (IPMI)	Trade Organization/Association
DOT-OST-2021-0056-0279	Motor & Equipment Manufacturers Association (MEMA)	Trade Organization/Association
DOT-OST-2021-0056-0264	National Association of City Transportation Officials	Trade Organization/Association
DOT-OST-2021-0056-0233	Partnership for Transportation Innovation and Opportunity	Trade Organization/Association
DOT-OST-2021-0056-0271	Self-Driving Coalition for Safer Streets	Trade Organization/Association
DOT-OST-2021-0056-0291	Transport Workers Union of America (TWU)	Trade Organization/Association
DOT-OST-2021-0056-0093	Women Builders Council, Inc.	Trade Organization/Association
DOT-OST-2021-0056-0252*	Association of Metropolitan Planning Organizations (AMPO)	Other Association
DOT-OST-2021-0056-0252*	American Public Transportation Association (APTA)	Other Association
DOT-OST-2021-0056-0252*	Community Transportation Association of America (CTAA)	Other Association

Docket ID	Commenter Name	Commenter Type
DOT-OST-2021-0056-0252*	National Association of Counties (NACo)	Other Association
DOT-OST-2021-0056-0252*	National Association of Development Organizations (NADO)	Other Association
DOT-OST-2021-0056-0252*	National Association of Regional Councils (NARC)	Other Association
DOT-OST-2021-0056-0252*	National League of Cities (NLC)	Other Association
DOT-OST-2021-0056-0199	Southeast Michigan Council of Governments	Other Association
DOT-OST-2021-0056-0151	North Central Texas Council of Governments	Other Association
DOT-OST-2021-0056-0114	Northeast States for Coordinated Air Use Management (NESCAUM)	Other Association
Non-Profit Organizations		
DOT-OST-2021-0056-0238	Alliance for a Just Society	Advocacy Organization
DOT-OST-2021-0056-0207*	Baltimore Transit Equity Coalition	Advocacy Organization
DOT-OST-2021-0056-0229	Center for Auto Safety	Advocacy Organization
DOT-OST-2021-0056-0227	Genesis: the Bay area affiliate of the Gamaliel Network	Advocacy Organization
DOT-OST-2021-0056-0149	GreenLatinos	Advocacy Organization
DOT-OST-2021-0056-0273	Labor Network for Sustainability	Advocacy Organization
DOT-OST-2021-0056-0239	MOVE Ohio	Advocacy Organization
DOT-OST-2021-0056-0250	Philadelphia Vision Zero Safety Data Subcommittee	Advocacy Organization
DOT-OST-2021-0056-0117	The Sikh Coalition	Advocacy Organization
DOT-OST-2021-0056-0164	Transportation for America	Advocacy Organization
DOT-OST-2021-0056-0107	American Council for an Energy-Efficient Economy	National/International Non-Profit
DOT-OST-2021-0056-0209	American Geriatrics Society	National/International Non-Profit
DOT-OST-2021-0056-0244	Community Transportation Association of America	National/International Non-Profit

Docket ID	Commenter Name	Commenter Type
DOT-OST-2021-0056-0200	Congress for the New Urbanism	National/International Non-Profit
DOT-OST-2021-0056-0272	Consortium for Citizens with Disabilities Transportation Task Force	National/International Non-Profit
DOT-OST-2021-0056-0120	Consumers for Auto Reliability and Safety	National/International Non-Profit
DOT-OST-2021-0056-0196	Latinos In Transit	National/International Non-Profit
DOT-OST-2021-0056-0307	Mothers Against Drunk Driving	National/International Non-Profit
DOT-OST-2021-0056-0221	National Aging & Disability Transportation Center	National/International Non-Profit
DOT-OST-2021-0056-0204	National Association of the Deaf	National/International Non-Profit
DOT-OST-2021-0056-0185	National Safety Council	National/International Non-Profit
DOT-OST-2021-0056-0255	Paralyzed Veterans of America	National/International Non-Profit
DOT-OST-2021-0056-0248	PeopleForBikes	National/International Non-Profit
DOT-OST-2021-0056-0256	Rails-to-Trails Conservancy	National/International Non-Profit
DOT-OST-2021-0056-0156	Securing America's Future Energy (SAFE)	National/International Non-Profit
DOT-OST-2021-0056-0150	Safe Routes Partnership	National/International Non-Profit
DOT-OST-2021-0056-0236	Southern Environmental Law Center	National/International Non-Profit
DOT-OST-2021-0056-0211	Strong Prosperous and Resilient Communities Initiative	National/International Non-Profit
DOT-OST-2021-0056-0237	The League of American Bicyclists	National/International Non-Profit
DOT-OST-2021-0056-0257	The MITRE Corporation	National/International Non-Profit
DOT-OST-2021-0056-0188	TransitCenter	National/International Non-Profit
DOT-OST-2021-0056-0203	VERITY NOW	National/International Non-Profit
DOT-OST-2021-0056-0214	Vision Zero Network	National/International Non-Profit
DOT-OST-2021-0056-0192	All Aboard Washington	Local Non-Profit/Community Organization

Docket ID	Commenter Name	Commenter Type
DOT-OST-2021-0056-0076*	Baltimore Transit Equity Coalition	Local Non-Profit/Community Organization
DOT-OST-2021-0056-0276	Chicago Women in Trades	Local Non-Profit/Community Organization
DOT-OST-2021-0056-0113*	Diversified Builders and Engineers Council (DBEc)	Local Non-Profit/Community Organization
DOT-OST-2021-0056-0155	East Coast Greenway Alliance	Local Non-Profit/Community Organization
DOT-OST-2021-0056-0119	Feonix - Mobility Rising	Local Non-Profit/Community Organization
DOT-OST-2021-0056-0287	Futurez NFP, Incorporated	Local Non-Profit/Community Organization
DOT-OST-2021-0056-0170	Hope Network	Local Non-Profit/Community Organization
DOT-OST-2021-0056-0317	Kawerak, Inc.	Local Non-Profit/Community Organization
DOT-OST-2021-0056-0311	Los Angeles LGBT Center	Local Non-Profit/Community Organization
DOT-OST-2021-0056-0305	MobilityData	Local Non-Profit/Community Organization
DOT-OST-2021-0056-0041	Oregon Tradeswomen	Local Non-Profit/Community Organization
DOT-OST-2021-0056-0243	Race Forward	Local Non-Profit/Community Organization
DOT-OST-2021-0056-0113*	Ta Yeiyari	Local Non-Profit/Community Organization
DOT-OST-2021-0056-0208	Transportation Learning Center	Local Non-Profit/Community Organization

Docket ID	Commenter Name	Commenter Type
DOT-OST-0056-XXXX	Tri-State Transportation Campaign (TSTC)	Local Non-Profit/Community Organization
DOT-OST-2021-0056-0296	Women Builders Council, Inc.	Local Non-Profit/Community Organization
Commercial		
DOT-OST-2021-0056-0297	Arrival	Consulting or Transportation Solutions Company
DOT-OST-2021-0056-0038	Arup	Consulting or Transportation Solutions Company
DOT-OST-2021-0056-0218	Caliper Corporation	Consulting or Transportation Solutions Company
DOT-OST-2021-0056-0109	Cityfi	Consulting or Transportation Solutions Company
DOT-OST-2021-0056-0306 & DOT-OST-2021-0056-0277	ClearRoad	Consulting or Transportation Solutions Company
DOT-OST-2021-0056-0177	Clever Devices, Inc.	Consulting or Transportation Solutions Company
DOT-OST-2021-0056-0198	Conveyal LLC	Consulting or Transportation Solutions Company
DOT-OST-2021-0056-0282	Deloitte Consulting LLP	Consulting or Transportation Solutions Company
DOT-OST-2021-0056-0217	Development Analytics LLC	Consulting or Transportation Solutions Company
DOT-OST-2021-0056-0234	ELERTS Corporation	Consulting or Transportation Solutions Company
DOT-OST-2021-0056-0270	Foursquare ITP	Consulting or Transportation Solutions Company
DOT-OST-2021-0056-0197	Jack Faucett Associates	Consulting or Transportation Solutions Company

Docket ID	Commenter Name	Commenter Type
DOT-OST-2021-0056-0267	Lacuna Technologies, Inc.	Consulting or Transportation Solutions Company
DOT-OST-2021-0056-0174	Michael S. Shapiro Consulting LLC	Consulting or Transportation Solutions Company
DOT-OST-2021-0056-0265	Nelson/Nygaard	Consulting or Transportation Solutions Company
DOT-OST-2021-0056-0181	Overland, Pacific & Cutler, LLC	Consulting or Transportation Solutions Company
DOT-OST-2021-0056-0223	Replica	Consulting or Transportation Solutions Company
DOT-OST-2021-0056-0172	Ruiz Strategies	Consulting or Transportation Solutions Company
DOT-OST-2021-0056-0178	SAS Institute Inc.	Consulting or Transportation Solutions Company
DOT-OST-2021-0056-0278	Steer	Consulting or Transportation Solutions Company
DOT-OST-2021-0056-0230	StreetLight Data, Inc.	Consulting or Transportation Solutions Company
DOT-OST-2021-0056-0205	Swiftly, Inc.	Consulting or Transportation Solutions Company
DOT-OST-2021-0056-0266	Toole Design Group	Consulting or Transportation Solutions Company
DOT-OST-2021-0056-0101	Trillium Solutions, Inc.	Consulting or Transportation Solutions Company
DOT-OST-2021-0056-0294	Via Transportation, Inc.	Consulting or Transportation Solutions Company
DOT-OST-2021-0056-0186	WSP USA	Consulting or Transportation Solutions Company

Docket ID	Commenter Name	Commenter Type
DOT-OST-2021-0056-0315	AAA	Other company
DOT-OST-2021-0056-0310	Aclima, Inc.	Other company
DOT-OST-2021-0056-0269*	CARTO and	Other company
DOT-OST-2021-0056-0263	Ford Autonomous Vehicles LLC.	Other company
DOT-OST-2021-0056-0269*	Google Cloud	Other company
DOT-OST-2021-0056-0246	New Flyer of America Inc.	Other company
DOT-OST-2021-0056-0159	Nuro	Other company
DOT-OST-2021-0056-0163	Uber Technologies, Inc.	Other company
DOT-OST-2021-0056-0115	mySidewalk	Other company
DOT-OST-2021-0056-0089	Delta Troy Interests. LTD	Other company
DOT-OST-2021-0056-0095	Hitachi America, Ltd.	Other company
DOT-OST-2021-0056-0140	Delta Troy Interests, LTD	Other company
DOT-OST-2021-0056-0026	HIRE360	Other company
Academic and Research		
DOT-OST-2021-0056-0207	Institute for Municipal and Regional Policy, Central CT State University	Educational/ Academic Institution
DOT-OST-2021-0056-0162	Johns Hopkins Center for Injury Research and Policy	Educational/ Academic Institution
DOT-OST-2021-0056-0094	Johns Hopkins University School of Public Health	Educational/ Academic Institution
DOT-OST-2021-0056-0213	MIT	Educational/ Academic Institution
DOT-OST-2021-0056-0099	NYU Rudin Center for Transportation	Educational/ Academic Institution
DOT-OST-2021-0056-0242	Transportation Research and Education Center, Portland State University	Educational/ Academic Institution
DOT-OST-2021-0056-0288	UC Berkeley Institute of Transportation Studies, California Partners for Advanced Transportation Technology, and	Educational/ Academic Institution

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	Transportation Sustainability Research Center	
DOT-OST-2021-0056-0058	UCLA Institute of Transportation Studies	Educational/ Academic Institution
DOT-OST-2021-0056-0168	University of Minnesota Accessibility Observatory	Educational/ Academic Institution
DOT-OST-2021-0056-0253	University of Texas Health Science Center at Houston School of Public Health	Educational/ Academic Institution
DOT-OST-2021-0056-0280	Virginia Tech Transportation Institute	Educational/ Academic Institution
DOT-OST-2021-0056-0247	Brookings Institution	Think Tank
DOT-OST-2021-0056-0298	PolicyLink	Think Tank
DOT-OST-2021-0056-0202	Reason Foundation	Think Tank
DOT-OST-2021-0056-0224	Victoria Transport Policy Institute	Think Tank
DOT-OST-2021-0056-0210 & DOT-OST-2021-0056-0193	National Renewable Energy Laboratory (NREL)	National Laboratory
DOT-OST-2021-0056-0283	Sustainable Transportation Initiative at Lawrence Berkeley National Laboratory.	National Laboratory
DOT-OST-2021-0056-0286	Brittney Kohler and others	Group of Experts
DOT-OST-2021-0056-0091	Daniel Erian Armanios, Jaison D. Desai, Samuel Jones, Nicola Ritsch, and Sunasir Dutta	Group of Experts
DOT-OST-2021-0056-0314	Maria Venner and others	Group of Experts
DOT-OST-2021-0056-0301	Jesus Barajas	Researcher or Expert
DOT-OST-2021-0056-0126	Daniel Baker	Researcher or Expert
DOT-OST-2021-0056-0152	Tia Boyd	Researcher or Expert
DOT-OST-2021-0056-0002	Pamela Jurney	Researcher or Expert

Docket ID	Commenter Name	Commenter Type
DOT-OST-2021-0056-0139	Eleftheria Kontou	Researcher or Expert
DOT-OST-2021-0056-0082	J Richard Kuzmyak	Researcher or Expert
DOT-OST-2021-0056-0017	Nicholas Lownes	Researcher or Expert
DOT-OST-2021-0056-0070	Jenny McArthur and Emilia Smeds	Researcher or Expert
DOT-OST-2021-0056-0299	Laurel Paget-Seekins	Researcher or Expert
DOT-OST-2021-0056-0274	Christopher Severen	Researcher or Expert
Governmental		
DOT-OST-2021-0056-0231	California Department of Transportation, Office of Race and Equity	State DOT
DOT-OST-2021-0056-0232	Connecticut Department of Transportation	State DOT
DOT-OST-2021-0056-0157	Kansas Department of Transportation	State DOT
DOT-OST-2021-0056-0179	Louisiana Department of Transportation and Development	State DOT
DOT-OST-2021-0056-0225	Massachusetts Department of Transportation	State DOT
DOT-OST-2021-0056-0284	Minnesota Department of Transportation	State DOT
DOT-OST-2021-0056-0206	Ohio Department of Transportation	State DOT
DOT-OST-2021-0056-0289	Oregon Department of Transportation	State DOT
DOT-OST-2021-0056-0187	Pennsylvania Department of Transportation	State DOT
DOT-OST-2021-0056-0127	The Utah Department of Transportation	State DOT
DOT-OST-2021-0056-0249	Washington State Department of Transportation	State DOT
DOT-OST-2021-0056-0215	Boston Region Metropolitan Planning Organization	MPO
DOT-OST-2021-0056-0175	Broward Metropolitan Planning Organization	MPO
DOT-OST-2021-0056-0251	Chicago Metropolitan Agency for Planning	MPO
DOT-OST-2021-0056-0180	Delaware Valley Regional Planning Commission	MPO

Docket ID	Commenter Name	Commenter Type
DOT-OST-2021-0056-0074	Fredericksburg Area Metropolitan Planning Organization's (FAMPO)	MPO
DOT-OST-2021-0056-0312	Greenville-Pickens Area Transportation Study	MPO
DOT-OST-2021-0056-0222	Hillsborough Transportation Planning Organization (TPO)	MPO
DOT-OST-2021-0056-0219	Metropolitan Council	MPO
DOT-OST-2021-0056-0220	Mid-Ohio Regional Planning Commission	MPO
DOT-OST-2021-0056-0281	Mid-Region Metropolitan Planning Organization	MPO
DOT-OST-2021-0056-0262	New York Metropolitan Transportation Council	MPO
DOT-OST-2021-0056-0260	Chicago Transit Authority	Transit Authority/ Public Transit Entity
DOT-OST-2021-0056-0288	Contra Costa Transportation Agency, UC Berkeley Institute of Transportation Studies, TSRC and PATH	Transit Authority/ Public Transit Entity
DOT-OST-2021-0056-0258	District Department of Transportation	Transit Authority/ Public Transit Entity
DOT-OST-2021-0056-0240	Greater Cleveland Regional Transit Authority	Transit Authority/ Public Transit Entity
DOT-OST-2021-0056-0293	King County Metro Transit	Transit Authority/ Public Transit Entity
DOT-OST-2021-0056-0261	Los Angeles County Metropolitan Transportation Authority	Transit Authority/ Public Transit Entity
DOT-OST-2021-0056-0228	Maryland Transit Administration	Transit Authority/ Public Transit Entity
DOT-OST-2021-0056-0226	Metro Regional Transit Authority	Transit Authority/ Public Transit Entity
DOT-OST-2021-0056-0194	Metropolitan Transportation Commission	Transit Authority/ Public Transit Entity
DOT-OST-2021-0056-0201	NY Metropolitan Transportation Authority (MTA)	Transit Authority/ Public Transit Entity
DOT-OST-2021-0056-0190	Regional Transportation Authority of Northeastern Illinois	Transit Authority/ Public Transit Entity
DOT-OST-2021-0056-0302	San Francisco Bay Area Rapid Transit (BART)	Transit Authority/ Public Transit Entity
DOT-OST-2021-0056-0268	San Francisco Municipal Transportation Agency	Transit Authority/ Public Transit Entity

Docket ID	Commenter Name	Commenter Type
DOT-OST-2021-0056-0123	Southern California Regional Rail Authority (SCRRA)	Transit Authority/ Public Transit Entity
DOT-OST-2021-0056-0295	Washington Metropolitan Area Transit Authority	Transit Authority/ Public Transit Entity
DOT-OST-2021-0056-0285	California Department of Motor Vehicles	Other Local Agency
DOT-OST-2021-0056-0118	Department of Transportation Services (City and County of Honolulu, Hawaii)	Other Local Agency
DOT-OST-2021-0056-0171	Hennepin County Board of Commissioners	Other Local Agency
DOT-OST-2021-0056-0316	Metropolitan Government of Nashville and Davidson County	Other Local Agency
DOT-OST-2021-0056-0173	Prince George's County Government	Other Local Agency
DOT-OST-2021-0056-0182	U.S. Members of Congress	Congressional Group