

# OpenTripPlanner – Shared Use Mobility Integration Project

## Equity and Accessibility Plan

Tri-County Metropolitan Transportation District of Oregon (TriMet)

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## Introduction

As part of the Mobility on Demand (MOD) Sandbox Program, the Federal Transit Administration (FTA) has awarded TriMet a \$678,000 grant to extend the OpenTripPlanner (OTP) platform to integrate transit and shared-use mobility options into one comprehensive application for multi-modal travel comparisons. The purpose of this memorandum is to provide an overview of the Tri-County Metropolitan Transportation District of Oregon (TriMet)'s programs, policies and resources to address accessible and equitable mobility service for all travelers, including communities such as people of color, those with low income, limited English proficient persons, the aging population, and persons with disabilities, including wheelchair users. In addition, it describes how these programs and policies will be implemented as part of the OpenTripPlanner Shared Use Mobility (OTP SUM) enhancements project.

## Project Background

The OpenTripPlanner (OTP), initially released as an open source project by TriMet in 2009, was the first to introduce multiple modes in one trip with the original focus on incorporating biking and walking networks with transit. Adoption of OTP has been strong, with implementation in dozens of cities and countries worldwide. TriMet now proposes to build upon the core of OTP to incorporate shared-use mobility (SUM) options.

TriMet's proposed project includes the development and expansion of two core data frameworks that current and future collaborative OTP initiatives can be built upon, producing replicable software and results for communities across the country. These two core project elements are to:

- Extend the OTP code base to integrate into transit trip planning shared-use mobility modes, such as bike share and TNCs, as well as updated real-time transit information.
- Implement a fully-functional and comprehensive open source geocoder built off the existing open source Mapzen Pelias geocoder.

In addition to core elements on the foundation frameworks, the project will also include:

- Development of a comprehensive new web-based user interface that will allow users to make intermodal trip plans including shared-use modes. The new web-based user interface will also display real-time information and report impacted itineraries to users.
- Improvements to basemap data so the trip planner can support enhanced pedestrian accessibility information and improvements to regional address data that will make location search and geocoding more effective and user-friendly.
- Design and implementation of compatibility for future booking and payment options in moovel's RideTap product so customers can plan and pay for their trips in one app.

TriMet's OTP SUM project will create a complete open platform for the integration of transit and SUM options. The open data, software and user interfaces, responsive on both web and mobile, will help all TriMet customers understand the multi-modal options to meet their mobility needs, including for the critical first and last miles of transit trips where a bus or train alone doesn't directly serve their origin or destination. TriMet recognizes the importance of ensuring equitable functionality and accessibility to the information provided through OTP SUM.

## Equity and Accessibility at TriMet

The following sections detail the programs, frameworks, and policies that TriMet uses to consider equity and accessibility in all service and programs provided by the agency within its service area. Equity is a key consideration in the provision of public transportation service, facilities and programs. To that end, TriMet has adopted an Equity Lens framework to guide planning, analysis and decision-making. For more information on these programs and policies, please visit the Equity and Access page of TriMet's website (<https://trimet.org/equity/>) or contact TriMet's Title VI and Equity Programs Administrator at 503-238-5711.

### What is an Equity Lens?

- A practical tool that helps to ensure policies and programs result in equitable outcomes for all residents.
- A tool that helps public agencies to consider equitable treatment of diverse communities and workforce when planning, developing and evaluating policies, programs and services.

### The Equity Lens Process

The Lens leads employees through the following stages:

- Assessing current organizational capacity for equity work;
- Describing current direction and strategies;
- Identifying inequities and injustices;
- Reflecting and understanding strengths and challenges;
- Enhancing what is leading to equity and empowerment; and
- Eliminating strategies and root causes leading to inequities and injustices.

### Examples of Equity Lens Questions

- Are there equity and inclusion concerns related to this issue? (e.g., accessibility, affordability, safety, culture, gender identity)
- Are the groups most affected by the policy consulted from the early stages of the policy development?
- What human and financial resources are required to address equity and inclusion in the implementation of this policy?
- Can we develop innovative solutions that draw upon the contributions and assets of those people most affected?

### Title VI

The United States has a long history of unjust treatment towards people of color. Although we have made great progress over the past few centuries, we still see disparities throughout our society along the lines of race and ethnicity – even in cases where decisions are made with the best of intentions.

The Civil Rights Movement of the mid-1950's and 60's brought the issues of segregation and racial injustice to the forefront of our national consciousness. The movement resulted in the historic passage of the Civil Rights Act of 1964, which included eleven "Titles" outlawing several types of race-based discrimination. One of these "Titles" – Title VI – included the following provision:

*No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.*

**The intent of Title VI is to remove barriers** and conditions that prevent minority, low-income, and persons with limited English proficiency (LEP) from equal access to public goods and services. In effect, Title VI promotes fairness and equity in federally assisted programs and activities. Title VI is rooted in the Constitutional guarantee that all human beings are entitled to equal protection of the law, and specifically addresses involvement of impacted persons in the decision-making process.

**There are many forms of illegal discrimination** based on race, color, or national origin that can limit the opportunity of underrepresented communities to gain equal access to services and programs. In operating a federally assisted program, a recipient cannot, on the basis of race, color, or national origin, either directly or through contractual means:

- Deny program services, aids, or benefits;
- Provide a different service, aid, or benefit, or provide them in a manner different than they are provided to others; or
- Segregate or separately treat individuals in any matter related to the receipt of any service, aid, or benefit.

#### What does this mean for TriMet?

As a recipient of federal financial assistance through the Federal Transit Administration (FTA), TriMet is subject to the rules and regulations provided through FTA Circular 4702.1B “Title VI Requirements and Guidelines for Federal Transit Administration Recipients” effective October 1, 2012 (“Circular”).

TriMet’s Director of Diversity and Transit Equity is chiefly responsible for administering and monitoring Title VI requirements, but it is the duty of every employee, vendor and contractor of the agency to ensure compliance with nondiscrimination and to further civil rights protections. The TriMet Board of Directors must also approve the agency’s Title VI program prior to its submittal to FTA.

TriMet’s commitment to equity can be seen across our agency, the transportation system it manages, and the community it serves. It is embedded in the policies and practices we develop and implement. It is embedded in the investments we make and partnerships we build, our workforce, our approach to contracting and our ever growing connections to our community.

#### Environmental Justice

Executive Order 12898, “Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations,” was signed by President Clinton on February 11, 1994. Subsequent to issuance of the Executive Order, the U.S. Department of Transportation (DOT) issued a DOT Order for implementing the Executive Order on environmental justice (EJ). The DOT Order (Order 5610.2(a), “Actions to Address Environmental Justice in Minority Populations and Low-Income Populations,” 77 FR 27534, May 10, 2012) describes the process the Department and its modal administrations (including FTA) will use to incorporate EJ principles into programs, policies, and activities.

The US Department of Transportation has adopted three fundamental environmental justice principles to guide transportation justice efforts:

- Avoid, minimize, or mitigate disproportionately high and adverse health and environmental effects, including social and economic effects, on communities of color and low-income populations.
- Ensure the full and fair participation by all potentially affected communities in the transportation decision-making process.
- Prevent the denial of, reduction in, or significant delay in the receipt of benefits by communities of color and low-income populations.

TriMet makes environmental justice a priority by identifying and addressing the effects of agency capital projects, programs, policies and activities on communities of color and low-income populations.

### Limited English Proficiency

The U.S. Department of Transportation (DOT) LEP guidance states that Title VI and its implementing regulations require that DOT recipients take reasonable steps to ensure meaningful access to their programs and activities by LEP persons. The Federal Transit Administration published its LEP Guidance in its Circular 4702.1B “Title VI Requirements and Guidelines for Federal Transit Administration Recipients” requiring recipients to develop an LEP implementation plan consistent with the provisions of Section VII of the DOT LEP guidance.

TriMet is committed to full compliance with Title VI and Executive Order 13166 to provide meaningful access to programs, services and benefits for persons with limited English proficiency, or LEP. From the Title VI Circular:

Consistent with Title VI of the Civil Rights Act of 1964, DOT’s implementing regulations, and Executive Order 13166, “Improving Access to Services for Persons with Limited English Proficiency” (65 FR 50121, Aug. 11, 2000), recipients shall take reasonable steps to ensure meaningful access to benefits, services, information, and other important portions of their programs and activities for individuals who are limited-English proficient (LEP).

In 2010, TriMet completed its LEP Language Assistance Plan and Implementation Schedule after an extensive review of the LEP populations in the TriMet service district and their needs. A special LEP Workgroup recommended a two- tiered approach to meeting the needs of LEP populations: Tier One retains successful programs and activities designed to meet the language needs of LEP populations; Tier Two identifies new areas of focus to further the agency’s goal of providing LEP customers with meaningful access to TriMet programs and services. This plan continues to guide TriMet as to how to best serve LEP populations.

### Four Factor Analysis

In 2017, TriMet updated its Four Factor Analysis. As per DOT and FTA guidance, there are four factors for agencies to consider when assessing language needs and determining what steps they should take to ensure access for LEP persons:

- 1) The number or proportion of LEP persons eligible to be served or likely to be encountered by a program, activity or service of the recipient;
- 2) The frequency with which LEP individuals come in contact with the program;

- 3) The nature and importance of the program, activity or service provided by the recipient to people's lives; and
- 4) The resources available to the recipient and costs.

## Web Content Accessibility

TriMet works extensively to ensure that its website and web-based applications such as OTP SUM are fully accessible and usable by customers with disabilities. Code for these applications is expected to be accessibility standards-compliant and follow Web Consortium Accessibility Guidelines (WCAG) Level A conformance. WCAG guidelines and success criteria are organized around four principles of accessibility:

- **Perceivable** - Information and user interface components must be presentable in ways that all users can perceive.
- **Operable** - User interface components and navigation must be usable by all users (the interface cannot require interaction that a user cannot perform)
- **Understandable** - Users must be able to understand the information as well as the operation of the user interface (the content or operation cannot be beyond their understanding)
- **Robust** - Content must be robust enough that it can be interpreted reliably by a wide variety of user agents, including assistive technologies (as technologies and user agents evolve, the content should remain accessible).

*(Adapted from Web Content Accessibility Guidelines (WCAG) Overview - <http://www.w3.org/WAI/intro/wcag.php>)*

More information on WCAG guidelines can be found at <https://www.w3.org/WAI/intro/wcag>. New designs for TriMet's website and web applications are typically tested with riders who use screen readers. In the past, this has involved the agency working with the Oregon Commission for the Blind, for example, to either observe a customer with a vision impairment using the site, or to recruit users to test it and submit feedback via email. A similar approach will be taken during the testing phase for OTP SUM.

## Public Involvement

TriMet has an established comprehensive public involvement process to ensure minority, low-income and LEP populations are engaged through public outreach and involvement activities. TriMet's Public Engagement Framework was originally submitted to the FTA on January 2013 as part of the response to the FTA's Title VI Program Review, and has been updated as part of this submittal. TriMet's Diversity and Transit Equity Department serves as a resource to other TriMet divisions to integrate these populations into TriMet's public involvement activities.

## Equity and Accessibility in OTP SUM

The sections that follow describe the intended actions that TriMet and the OTP SUM project team will take to ensure that equity and accessibility are a key consideration throughout the OTP SUM development, implementation, and testing process. With assistance from the Title VI and Equity Program Administrator and the Diversity and Transit Equity department, the OTP SUM team will implement the frameworks and policies described in the section above to evaluate equity considerations for the OTP SUM application.

## Title VI

TriMet will adhere to all rules and regulations provided through FTA Circular 4702.1B, as adopted through TriMet's 2016 Title VI Program Update, throughout OTP SUM development, implementation, and testing.

The new OTP front-end application will be a "mobile first" web app, not a native smartphone app. This means that its full functionality will be available to all internet users, regardless of whether they access the tool from an iPhone, Android phone, desktop computer, tablet, or other type of hardware. Thus, it will not exclude low income persons people who may not own a smartphones but who can access the internet in other ways.

For people who lack access to or comfort with the internet, the enhanced trip planning capabilities will still be available via our call center. The existing deployment of OTP (without SUM integration) is already accessible to customers through call-takers in the customer service department, who provide trip planning assistance seven days a week from 7:30am to 5:30pm. The trip planning application that these call takers use will be updated to include new SUM modes, and the staff will be trained on the new functionality.

## Environmental Justice

With guidance from the Title VI and Equity Programs Administrator, the project team will apply the TriMet Equity Lens framework described above to both the technical design of the OTP SUM enhancements, as well as the roll-out and testing of the application itself. This project will leverage TriMet's Public Engagement Framework to ensure that Environmental Justice and Title VI communities are represented as part of the test group.

While the scope of this phase of OTP SUM only includes a plan for payment integration, not implementation of integrated payment, TriMet recognizes that some of its customers might not have access to bank accounts or credit card accounts to link to payment for SUM trips. The project team will work with moovel (responsible for conducting the integrated payment plan) to develop strategies for making future integrated payment functionality accessible to people with access to linked bank or credit card accounts.

As part of the implementation and testing phase of the OTP SUM improvements, TriMet will evaluate the availability and use of the OTP SUM application by geographic area as well as monitor the availability of other support available to TriMet customers to ensure equal access to all public transportation services and agency programs provided by TriMet.

## Limited English Proficiency

Informed by the agency's Four Factor Analysis, TriMet's website provides basic How to Ride information in eleven languages besides English (Spanish, Vietnamese, Chinese, Russian, Korean, Japanese, Tagalog, Romanian, Somali, Arabic, Cambodian, and Persian). This includes information on fare payment, rules for riding, safety and security, accessibility, and agency contact information including interpretation services. All these pages also have TriMet's Title VI public notice, complaint procedures, and complaint form in the relevant language. As TriMet has prioritized resources on serving the largest group in the LEP

population<sup>1</sup>, the Spanish web pages have more extensive content, including a current version of OTP in Spanish. The next generation trip planner will also be available in both English and Spanish, and the project team will conduct a Four-Factor analysis to determine if support for additional languages will be appropriate. TriMet will monitor the use of OTP SUM in order to improve the user experience and meet the needs of LEP populations (as applicable).

### Enhancing Accessibility of Recommended Pedestrian Routes

A key component of enhancements to the core OTP routing engine will allow for more detailed pedestrian and wheelchair access routing and directions text to and from transit stops by incorporating updates to the OpenStreetMap (OSM) pedestrian network. The concentrated effort in improving both the accessibility data in the street network and its use in OTP will be a sharp enhancement to equity for persons with disabilities. TriMet is collaborating with the OSM coding community to establish best practices for representing this accessibility information in the base network to serve as a model for communities nationwide. TriMet will build out this accessibility information in the OSM network and provide a model for replicating this work in other regions.

This model will then provide the basis for infusing this information into the OTP core engine so that it can make optimal use for planning pedestrian trips. Further, with this capability included in the OTP core, derivative products such as Transport Analyst will have enhanced capabilities for equity analysis activities. In addition, through other linked applications to this effort (namely, the VTrans project to expand OTP to support demand-responsive transit service), our combined efforts will allow OTP to read the GTFS-flex specification, which will surface itineraries for “flexible” public transit modes like hail-and-ride and deviated-fixed services, furthering improving trip making capabilities for people with disabilities and the aging population who often depend upon these flexible services.

Because the scope of OTP SUM is only to allow passengers to plan trips, with links to SUM providers’ applications (there is no direct provision or subsidy for the SUM segments of trips planned within OTP SUM), equivalent service requirements do not apply for the SUM segments of trips planned within OTP.

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<sup>1</sup> Spanish-speaking LEP persons comprise over 4% of the TriMet Service District population, whereas LEP Speakers of the next most common language, Vietnamese, make up less than 1% of the total population. Source: TriMet 2016 Title IV Update, available at <https://trimet.org/about/pdf/2016-title-vi.pdf>