

TPB REGION HIGH-CAPACITY TRANSIT NETWORK ACCESSIBILITY

Website Introduction

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TPB REGIONAL PUBLIC TRANSPORTATION SUBCOMMITTEE

February 27, 2024

Agenda

- Project Goals
- Methodology
 - Accessibility Analysis
 - Station Classification
 - Prioritization
- Case Studies
- Planning Dashboard
- Toolkit

Website:



bit.ly/49rLSXH



PROJECT GOALS

Understanding HCT Service



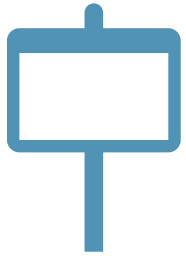
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Understanding HCT

- Contextualize HCT with analyses of:
 - Accessibility
 - Connectivity
 - Transit service
 - Population/employment density
- Prioritize station-level improvements



Analysis Overview



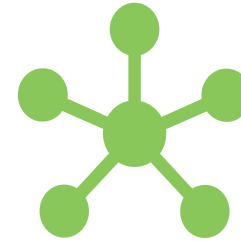
Station Classification

- Define level of service and people and destinations served by each HCT station



Accessibility Analysis

- Understand the regional travel landscape; in other words, what geographies have access to a HCT station



Connectivity Analysis

- Explore connections between HCT stations and residents, jobs, and points of interest



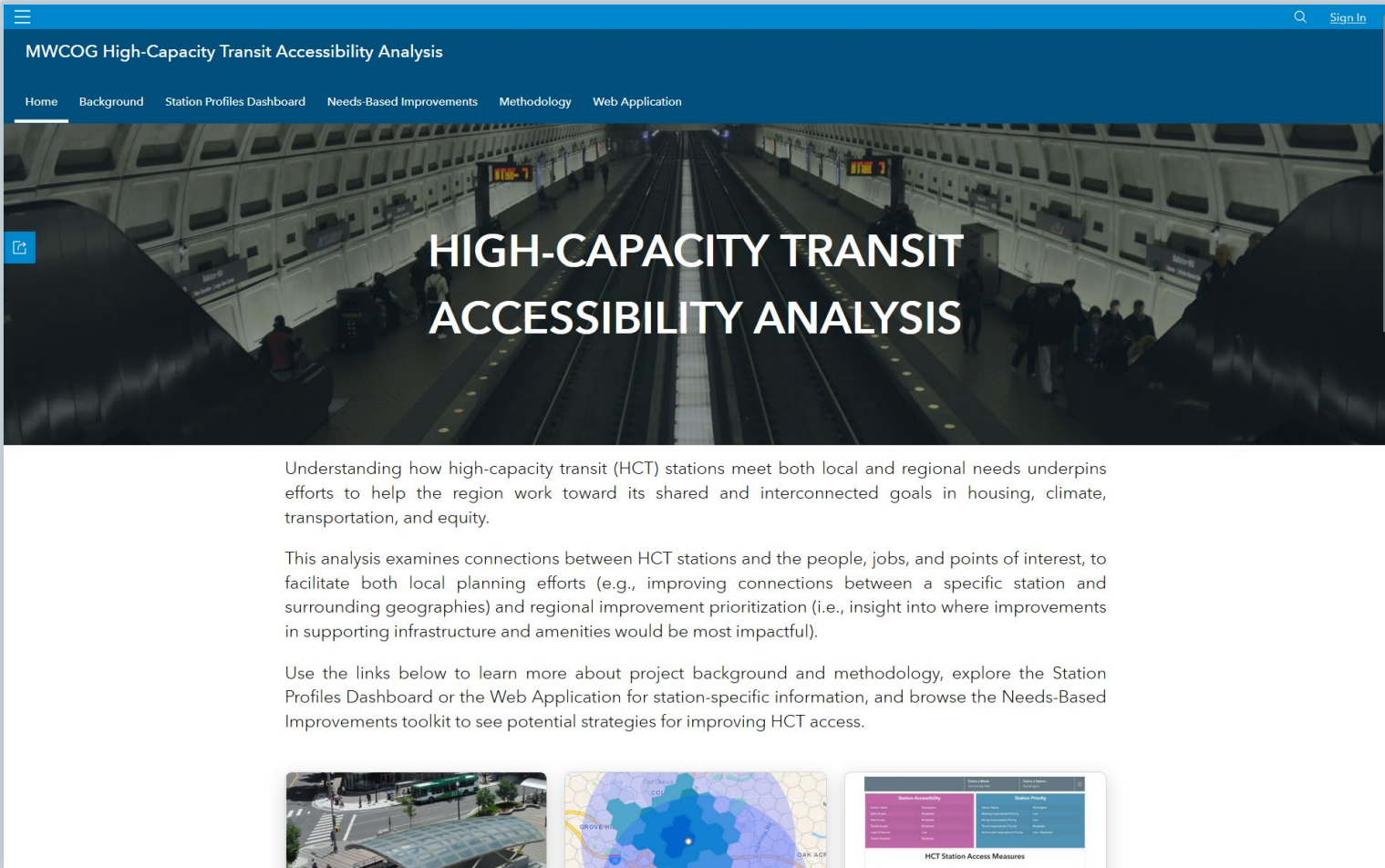
Improvement Prioritization

- Combine accessibility and connectivity analyses to understand HCT stations with the greatest number of missed connections to people, jobs, and points of interest



Since the Phase II Update:

- Developed the Station Profiles Dashboard
- Enhanced improvements toolkit
- Finalized analyses and web application*



MWCOG High-Capacity Transit Accessibility Analysis

Home Background Station Profiles Dashboard Needs-Based Improvements Methodology Web Application

HIGH-CAPACITY TRANSIT ACCESSIBILITY ANALYSIS

Understanding how high-capacity transit (HCT) stations meet both local and regional needs underpins efforts to help the region work toward its shared and interconnected goals in housing, climate, transportation, and equity.

This analysis examines connections between HCT stations and the people, jobs, and points of interest, to facilitate both local planning efforts (e.g., improving connections between a specific station and surrounding geographies) and regional improvement prioritization (i.e., insight into where improvements in supporting infrastructure and amenities would be most impactful).

Use the links below to learn more about project background and methodology, explore the Station Profiles Dashboard or the Web Application for station-specific information, and browse the Needs-Based Improvements toolkit to see potential strategies for improving HCT access.

HCT Station Access Measures



WEBSITE ORIENTATION

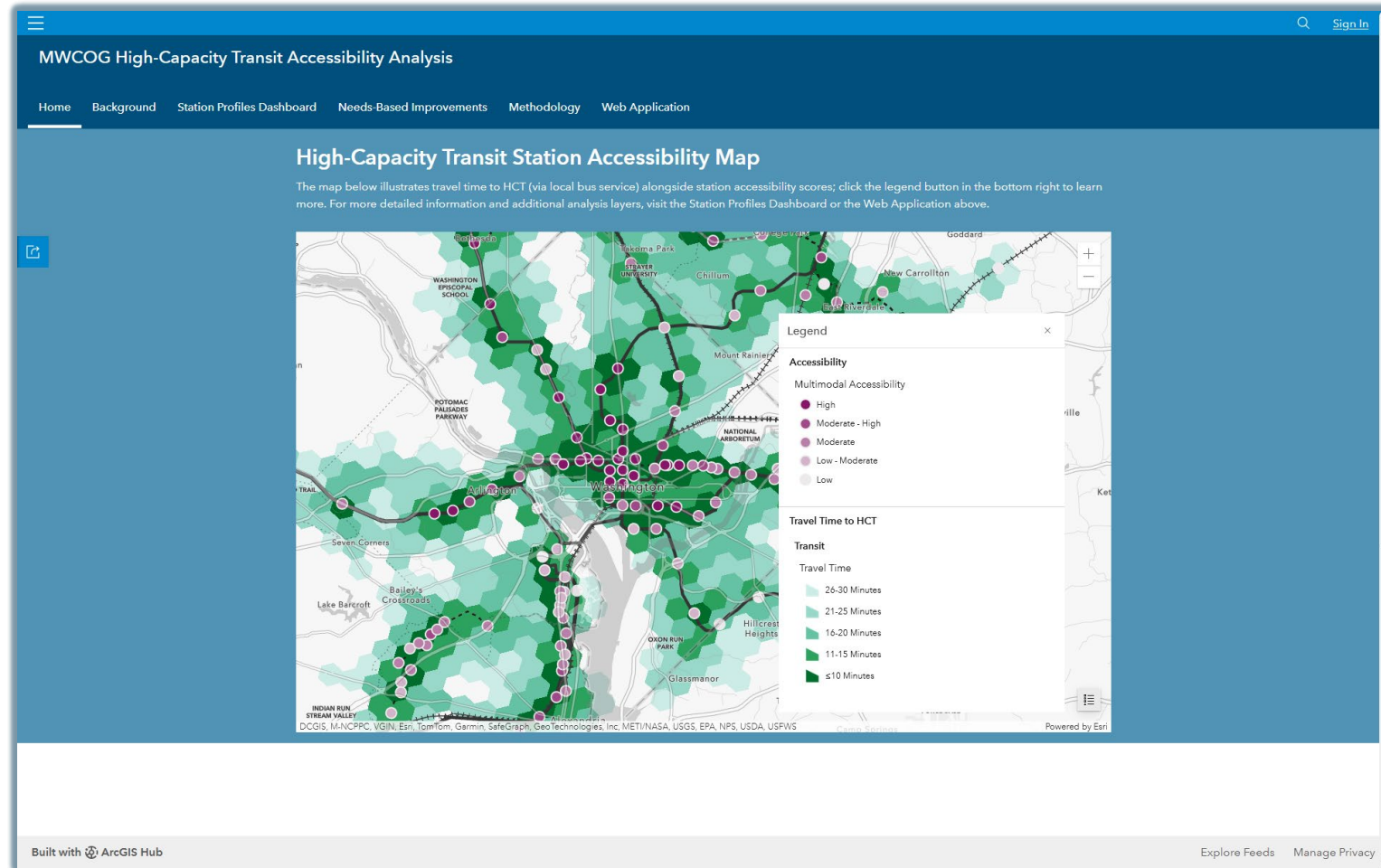
<https://mwcog-high-capacity-transit-accessibility-analysis-fitp.hub.arcgis.com/>



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Home

- Project overview
- Introduction to elements
- Dashboard/application preview



Background

- HCT definition
- Accessibility findings (literature review)
- Regional planning efforts

MWCOG High-Capacity Transit Accessibility Analysis

Home Background Station Profiles Dashboard Needs-Based Improvements Methodology Web Application

Why This Analysis?

High-capacity transit (HCT) encompasses Metrorail, commuter rail, light rail, streetcar, and bus rapid transit (BRT). An understanding of how HCT stations meet both local and regional needs underpins efforts to help the region work toward its shared and interconnected goals in housing, climate, transportation, and equity. This analysis examines connections between HCT stations and the people, jobs, and points of interest, to facilitate both local planning efforts (e.g., improving connections between a specific station and surrounding geographies) and regional improvement prioritization (i.e., insight into where improvements in supporting infrastructure and amenities would be most impactful).

Regardless of proximity to HCT, access depends on the local street network - including active transportation infrastructure - and the availability of local transit services. Routing possible trips along the existing transportation networks provides Metropolitan Washington Council of Governments (MWCOG) with approximate walking, biking, and transit to HCT stations via from areas that are theoretically close to the HCT network. Using the transportation network, rather than measuring access "as the crow flies", allows MWCOG to account for variables not captured by a buffer analysis that do regularly impact a person's access to their needs, like the connectivity afforded by the street grid or the transfers required for someone to continue their journey on transit.

Overview

To inform the development of the HCT analysis, MWCOG reviewed relevant Transit Cooperative Research Program (TCRP) reports and related studies and programs conducted by TPB and WMATA to improve access to high-capacity transit stations in the Washington region. This literature review summarizes best practices for station access analysis and highlights considerations for optimizing development of high-capacity transit networks.

Both the TPB and WMATA are proactively addressing many of the factors and complications addressed in this literature review. Three primary findings from this literature review will help inform the future planning processes for HCT stations in the region:

<p>Cooperation is imperative.</p> <p>Providing access to high-capacity transit stations should be a cooperative effort by transit agencies, jurisdictions that own/operate adjacent right-of-way, planning agencies, private developers (in the case of joint development agreements), and the surrounding community. Where land abutting high-capacity transit stations is owned by local jurisdictions, coordination is paramount to establish access for people walking and biking to these stations. WMATA's joint development agreement program is an industry-leading example of a transit agency partnering with local jurisdictions, private developers, and community members to maximize development and access to high-</p>	<p>Lower barriers to entry.</p> <p>Barriers to entry relates to both access barriers and fare integration barriers. From an access perspective, access for each mode should be tailored to the surrounding urban environment and station users. Low or no-cost transfers between modes (e.g., fixed-route bus and Metrorail), should be easy, attractive, and seamless, to make high-capacity transit systems more accessible to low-income users, increase ridership, and make the system simpler for people to use</p>	<p>Frequency and reliability are critical.</p> <p>Several TCRP reports identified frequency of transit service at high-capacity stations and the reliability of service as determinative attributes that contribute to the decision to utilize HCT. In a post-COVID environment, improving HCT frequencies presents an opportunity to recapture ridership lost during the pandemic. Coordinating transfer times between modes servicing HCT stations (e.g., fixed-route bus, commuter bus, or commuter rail) is a related factor to maximize time savings for riders</p>
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Background

- HCT definition
- Accessibility findings (literature review)
- Regional planning efforts

MWCOC High-Capacity Transit Accessibility Analysis

Home Background Station Profiles Dashboard Needs-Based Improvements Methodology Web Application

Why This Analysis?

High-capacity transit (HCT) encompasses Metrorail, commuter rail, light rail, streetcar, and bus rapid transit (BRT). An understanding of how HCT stations meet both local and regional needs underpins efforts to help the region work toward its shared and interconnected goals in housing, climate, transportation, and equity. This analysis examines connections between HCT stations and the people, jobs, and points of interest, to facilitate both local planning efforts (e.g., improving connections between a specific station and surrounding geographies) and regional improvement prioritization (i.e., insight into where improvements in supporting infrastructure and amenities would be most impactful).

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Overview

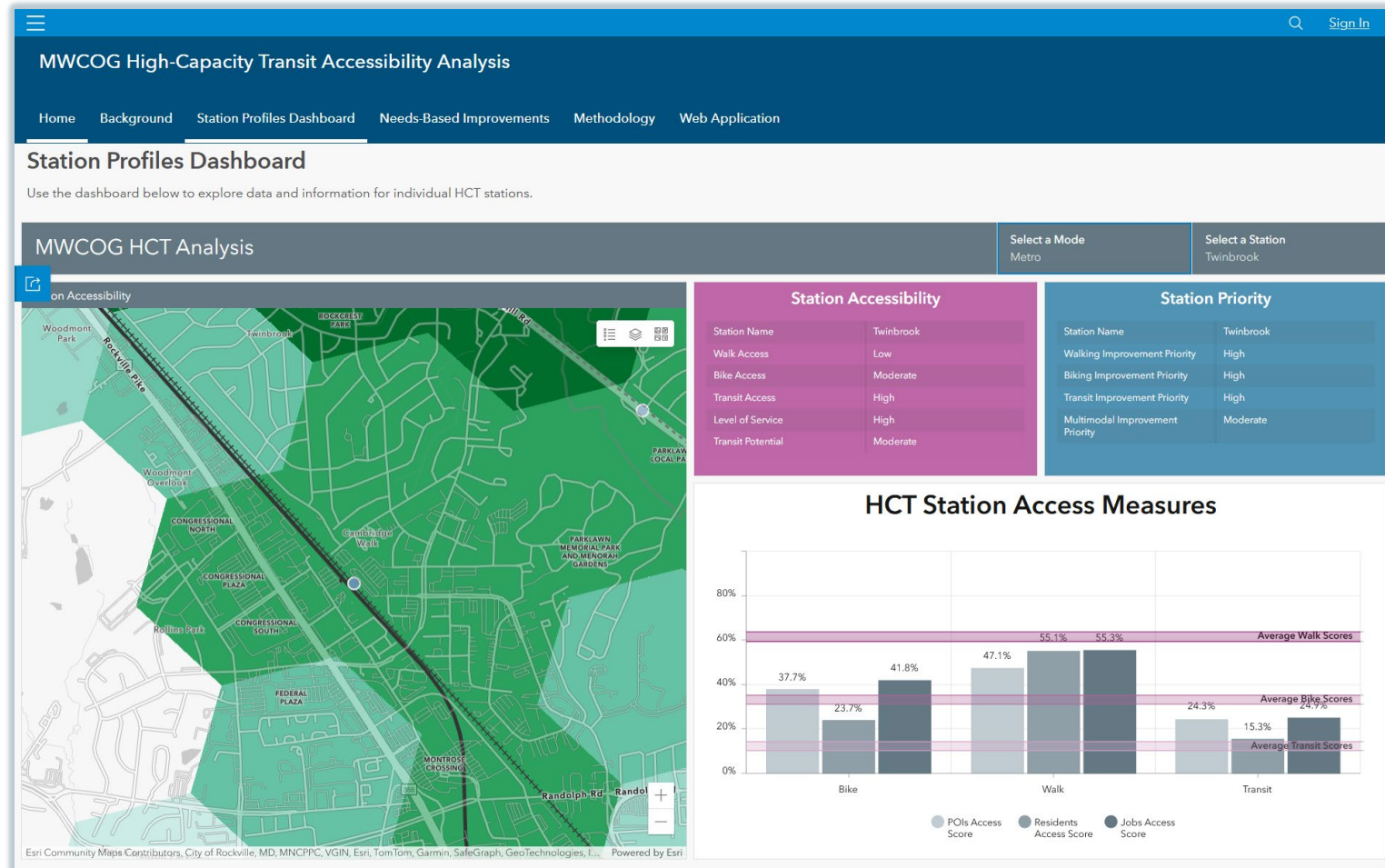
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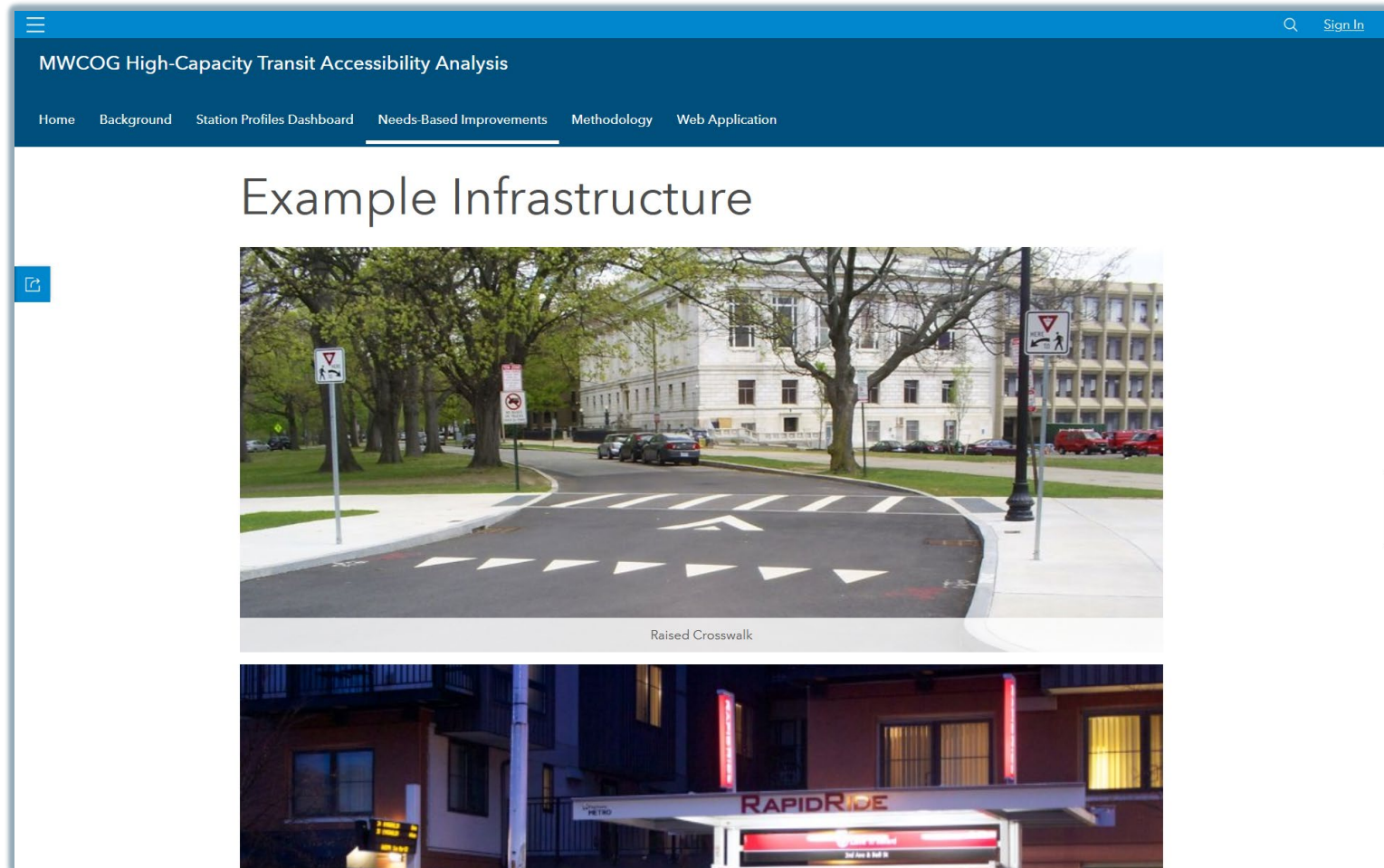
Station Profiles Dashboard

- Browse station accessibility and improvement prioritization index scores
- Compare modal accessibility measures to regional averages



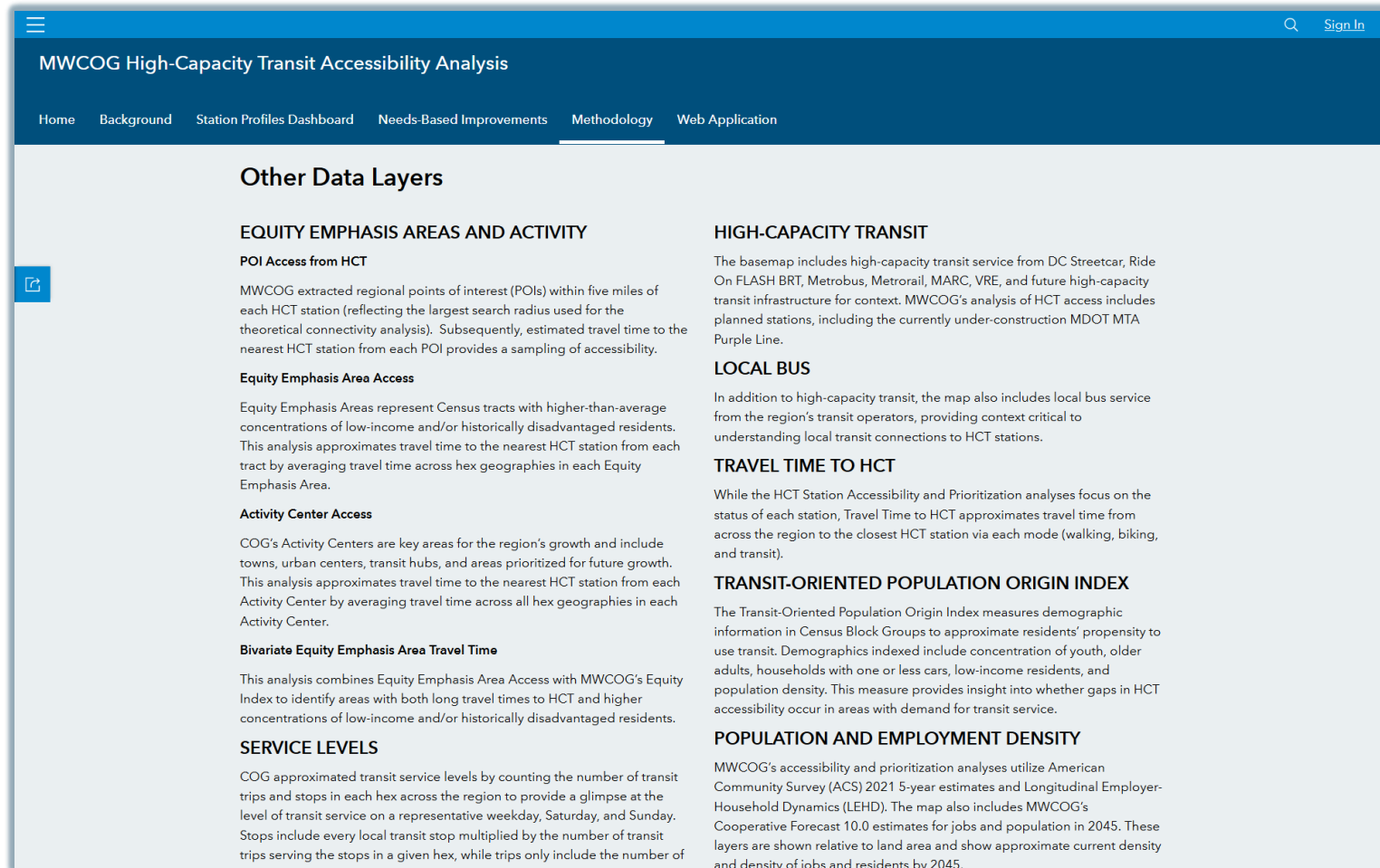
Needs-Based Improvements

- Browse access improvement strategies by station context
- Explore best practices



Methodology

- Understand accessibility calculations and the HCT station improvement need prioritization process
- Explore analyses underlying supporting dashboard/application layers

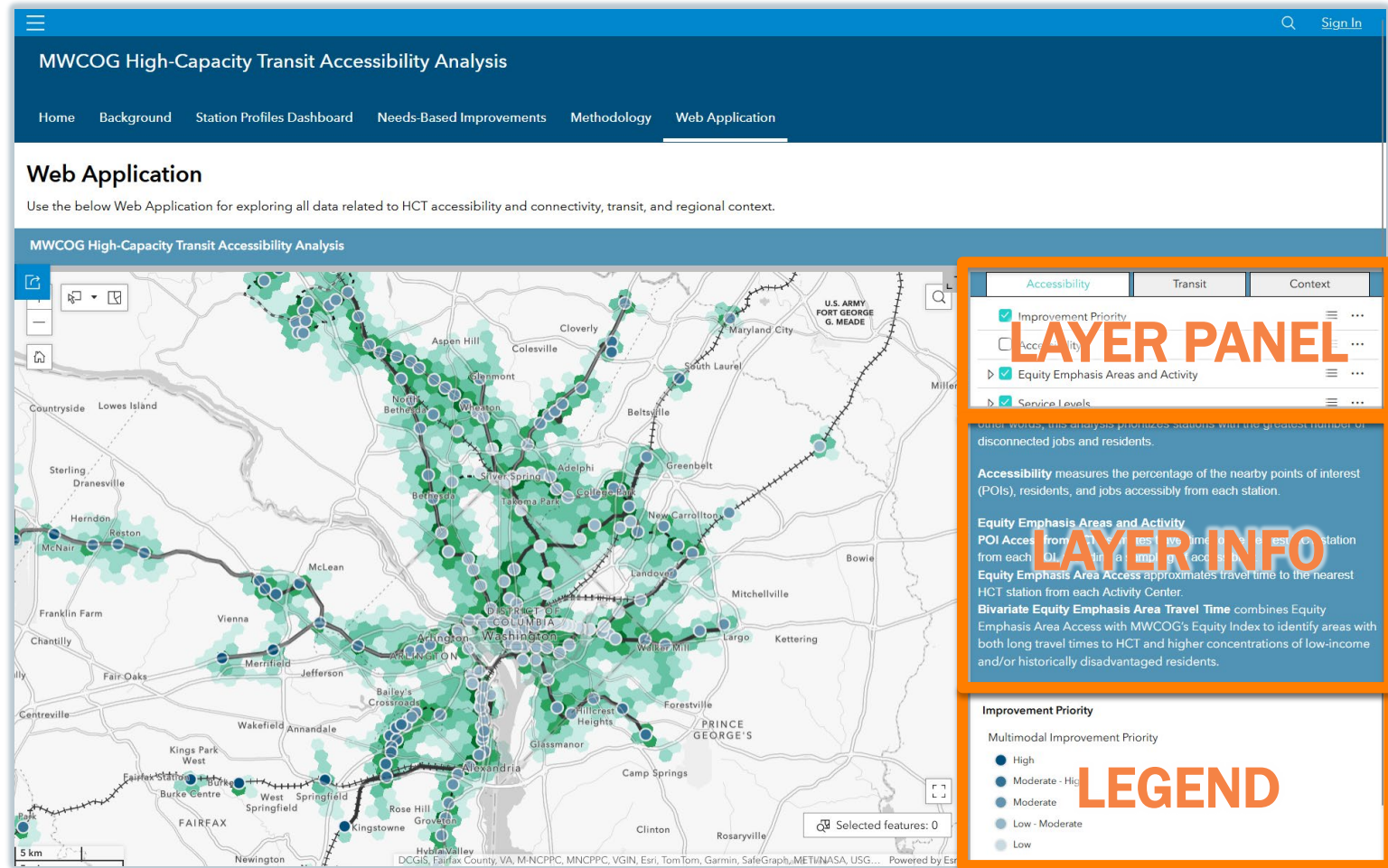


The screenshot displays the 'Methodology' page of the MWCOC High-Capacity Transit Accessibility Analysis website. The page features a blue header with the title and navigation links: Home, Background, Station Profiles Dashboard, Needs-Based Improvements, Methodology (selected), and Web Application. The main content is organized into two columns under the heading 'Other Data Layers'. The left column includes sections for 'EQUITY EMPHASIS AREAS AND ACTIVITY', 'POI Access from HCT', 'Equity Emphasis Area Access', 'Activity Center Access', and 'Bivariate Equity Emphasis Area Travel Time'. The right column includes sections for 'HIGH-CAPACITY TRANSIT', 'LOCAL BUS', 'TRAVEL TIME TO HCT', 'TRANSIT-ORIENTED POPULATION ORIGIN INDEX', and 'POPULATION AND EMPLOYMENT DENSITY'. Each section provides a brief description of the data and analysis used in the study.



Web Application

- Choose your own adventure interface for browsing regional HCT data



USING THE WEBSITE

Demonstration



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Transportation Planning Board

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