METROLINK.

ACCESSIBILITY AND AFFORDABILITY STUDY

7 CONCLUSION

8 ENDNOTES

9 APPENDICES

Tamika L. Butler Consulting, LLC
Tamika L. Butler
Naomi Iwasaki
Scott Frazier
Midori Valdivia
Kimberly Ming Ford

LETTERS FROM METROLINK

Our world is different in 2021 from what it was before COVID-19 changed it. Transportation agencies worldwide in the months and years to come will be exploring how to be responsive to their communities' changing needs. Metrolink has delved deeply into our business model, our ridership, and our projections for the future to grasp the evolving needs of those we serve in Southern California. The Metrolink Accessibility and Affordability Study provides a clarity of focus on social equity and physical health within the communities we serve as the pathway to increased future relevance and success of our service.

Metrolink was envisioned as a service for daily commuters to the job centers in Los Angeles and Orange County. But we have grown into much more. Our changing world demonstrates that a new vision is required that expands the definition of our role. Our Triple Bottom Line business model recognizes that income and expenses can't be the only ways we see our value. We have a responsibility to protect our natural environment and help many of the most vulnerable in our society.

We've learned through two customer surveys that, despite losing 90 percent of our riders due to stay-at-home orders, those who remain with us represent an unshakeable core. Three-quarters of our dedicated riders are essential workers that are relied on to staff hospitals, care for children, administer food and medicine to our elderly and provide all the services our society needs.

Nearly a third of our riders say they don't have access to a vehicle. This makes Metrolink more important to these riders than ever, and these riders are more important to us than ever. We are an important part of the essential worker family helping essential workers keep our economy moving.

Moving forward, we must be intentional in ensuring our service can offer riders the critical connection to healthcare they need. Our 538-route miles pass by 622 healthcare facilities within a five-mile radius. This is an untapped market that represents a potential for tremendous growth and an opportunity for Metrolink to play an important part in closing the gap in health equity for our most vulnerable populations.

We are dedicated to connecting people through trains that are cleaner—and safer—than ever before. Our goal of being petroleum free by 2022 is achievable with a pilot study already underway to utilize renewable fuels in our locomotives. If the study is as successful as we anticipate, soon our trains will produce dramatically less air pollution resulting in cleaner skies for Southern California.

The Metrolink Accessibility and Affordability Study provides recommendations, none of which is more important than our commitment that the quality of service is not predicated on a person's race, ethnicity, gender, socioeconomic status, ability, age or other cultural or sociodemographic characteristics.

We are a new Metrolink emerging into a new age. We are charting a course of social justice, environmental responsibility, and greater economic health than we've ever known before. Metrolink's staff is dedicated to these successful outcomes and have set their minds to the task. We are committed to improving the health of people, communities, and the environment in Southern California and we're confident we can help advance the conversation with the tools and resources from this study.

Sincerely,

Stephanie N. Wiggins
Metrolink CEO

As we envision the future of Metrolink in Southern California, our Strategic Business Plan continues to guide us on how we can best serve the diverse communities of our region in the most equitable way possible, now and for future generations. Given the country's current and acute state of social unrest, this Accessibility and Affordability Study is perhaps one of the most critical action steps borne from that plan—and it's one the Metrolink Board embraces whole-heartedly.

The study is critical in re-framing our approach to ensuring the universal mobility of all people living in our vast region. The Accessibility and Affordability Study identifies gaps in equity and access and provides a series of recommendations that will enhance our service so we can accommodate all who need us in connecting them to what's important in their lives despite where they live or their level of income.

We must continue to provide a link to resource and opportunity. This comes in the form of affordable fare products and targeted investments in alignment with the Biden Administration's Build Back Better approach, infrastructure planning that takes vulnerable populations under consideration. When we can help close the chasm of economic disparity, we become a catalyst for change for our region's marginalized areas.

As we have navigated the pandemic, we have made progress. We incorporated the Triple Bottom Line as a key pillar in our Recovery Plan Framework to ensure equity while accelerating a cleaner environment and stimulating the local economy. We moved forward with the Southern California Optimized Rail Expansion program (SCORE) to upgrade and improve Metrolink's regional system; and we implemented new affordable fare products that address changing demographics and habits of our riders.

These initiatives have helped us tremendously to plan for a resilient future, and we are eager to utilize the goals, tools and practices they provide to take immediate action to improve the accessibility and delivery of transportation services with equitable solutions for years to come.

We are grateful that this equity framework can pave that path and make sure that all who reside in our great region—including lower-income earners and people of color—can actively contribute to its vibrancy and fully share in all it has to offer.

Sincerely,

Ara Najarian
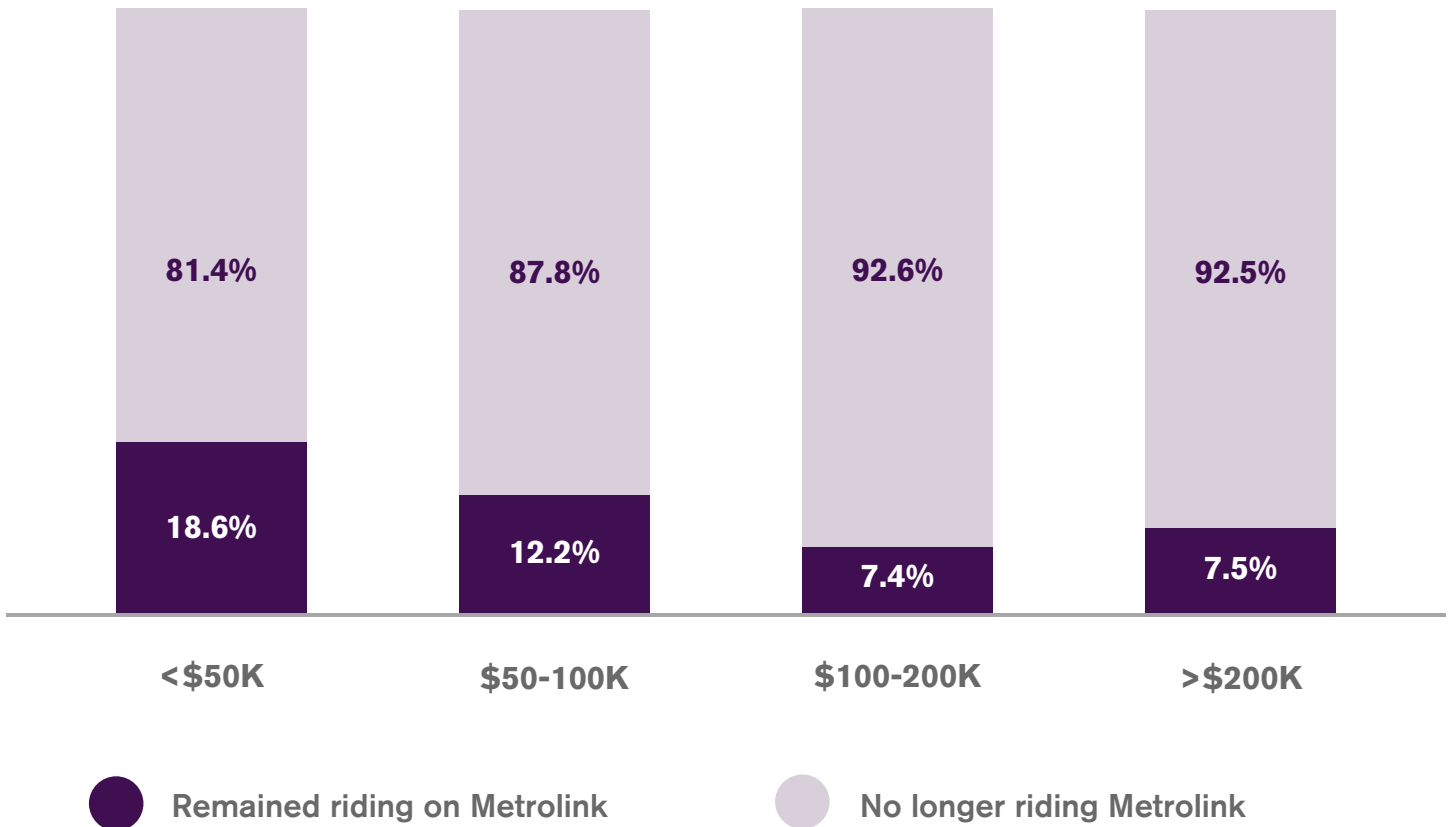Metrolink Board Chair

EXECUTIVE SUMMARY

Metrolink has provided commuter rail services in six counties across Southern California for almost 30 years, with a record high ridership of nearly 12 million boardings in Fiscal Year (FY) 2019. With this study and report, Metrolink is continuing the process started by Chief Executive Officer Stephanie Wiggins to define equity and address existing structural inequities in the delivery of regional transportation service throughout its five-county service area. Metrolink is seeking to learn from social equity communities and from peer public agencies. In doing so, Metrolink is also acknowledging that, while inequity has garnered more headlines in the last year, it is not a new problem.

When the COVID-19 pandemic and subsequent lockdown and distancing measures swept the country in March 2020, transit agencies experienced a sudden drop in ridership like never before. Metrolink not only saw approximately 90% of their riders disappear, but a striking shift in demographics among those remaining: lower incomes and higher proportions of essential and healthcare workers. On a broader level, communities hit hardest by the pandemic were those who have historically been marginalized and oppressed: Black, Indigenous, and other people of color (BIPOC) individuals, frontline workers, older adults, and those without resources and means to socially distance in all aspects of their lives at home, while traveling, at work, etc.

Nationally, as transit agencies found themselves forced to rapidly respond to the ridership and revenue decreases, the country also saw widespread uprisings and social actions. The murder of George Floyd by Minneapolis police officers became a rallying cry to demand change to systemic inequality and a stop to the disproportionate death of Black people at the hands of law enforcement. People of all ages and colors sought for greater accountability from institutions such as corporations and government agencies, including in Southern California.

Aside from the unprecedented drop in ridership, an April 2020 customer survey also revealed that lower income riders (earning less than $50,000 annual income) continued to ride Metrolink after the pandemic declaration and subsequent stay-at-home orders, at higher rates than riders in the highest income brackets (earning $100,000 and higher annual income). Further, 57% of survey respondents with annual incomes lower than $50,000 also reported having no car, with Metrolink being their sole transportation option.

Share of Riders by Income Remaining on Metrolink After 2020 Pandemic Stay-at-Home Orders (April 2020)

	<$50K	$50-100K	$100-200K	>$200K
No longer riding Metrolink	81.4%	87.8%	92.6%	92.5%
Remained riding on Metrolink	18.6%	12.2%	7.4%	7.5%

● Remained riding on Metrolink   ● No longer riding Metrolink

Source: Metrolink April 2020 Customer Survey

In the same survey, a majority of remaining riders identified as essential workers, in healthcare and transportation for all income brackets and in healthcare and food/agriculture for the lowest income bracket.

It is within this context that the Metrolink CEO responded quickly to re-evaluate Metrolink's value proposition and recognized that the agency could not continue to do things the same way as the last three decades. Notably, Metrolink needed to identify potential customers not previously reached out to and seek to understand their travel needs to better serve them. Later in 2020, the agency released the Metrolink Recovery Plan Framework as an approach to rebuild the agency's ridership and approach to service. Within the Recovery Plan Framework, the "Triple Bottom Line" emerged as one of five main pillars, specifically focusing on three key components: economy, environment, and equity. In an effort to incorporate these components into a response to the decrease in system ridership, Metrolink also initiated an Accessibility and Affordability Study ("Study").

The primary objective of the Study is to identify ways that Metrolink could respond to the unprecedented impacts from the COVID-19 pandemic and increase the accessibility and affordability of its system. As a first step, the consultant team sought to understand how equity might be implemented and operationalized into Metrolink, such as guiding the agency's decisions to more intentionally center the needs of riders and customers with the fewest resources and options available. The importance of an equity framework is rooted in the reality that broader societal conditions contain systemic inequities that have led to decades of exclusion and discrimination, as well as present-day

disparities. An equity framework serves as a comprehensive tool to account for these historical harms as a basis for determining current and future interventions.

While transit is a public service and a public good intended for everyone, social disparities have placed some populations more dependent on public transportation—and other public policies and services—than others. An equity framework prioritizes the distribution of agency resources and services to benefit populations and communities who experience the most societal barriers to access opportunity, while intending to minimize or eliminate burdens on these same groups. This report outlines a recommended equity framework within which Metrolink can assess potential benefits and burdens of its policies, programs, and decisions on marginalized communities in the agency's service area.

It is within this framework of equity that the Study further examines practical implementation of short-term policies and programs to enhance accessibility and affordability of the Metrolink system. As components of equity, accessibility and affordability are specific types of intervention that Metrolink might pursue to serve the needs of transit-dependent and vulnerable riders, improve conditions for everyone on the Metrolink system, and eventually capture latent and new riders in a return to pre-pandemic ridership levels and to grow beyond that in the future.

Types of Essential Workers Remaining on Metrolink, by Income (April 2020)
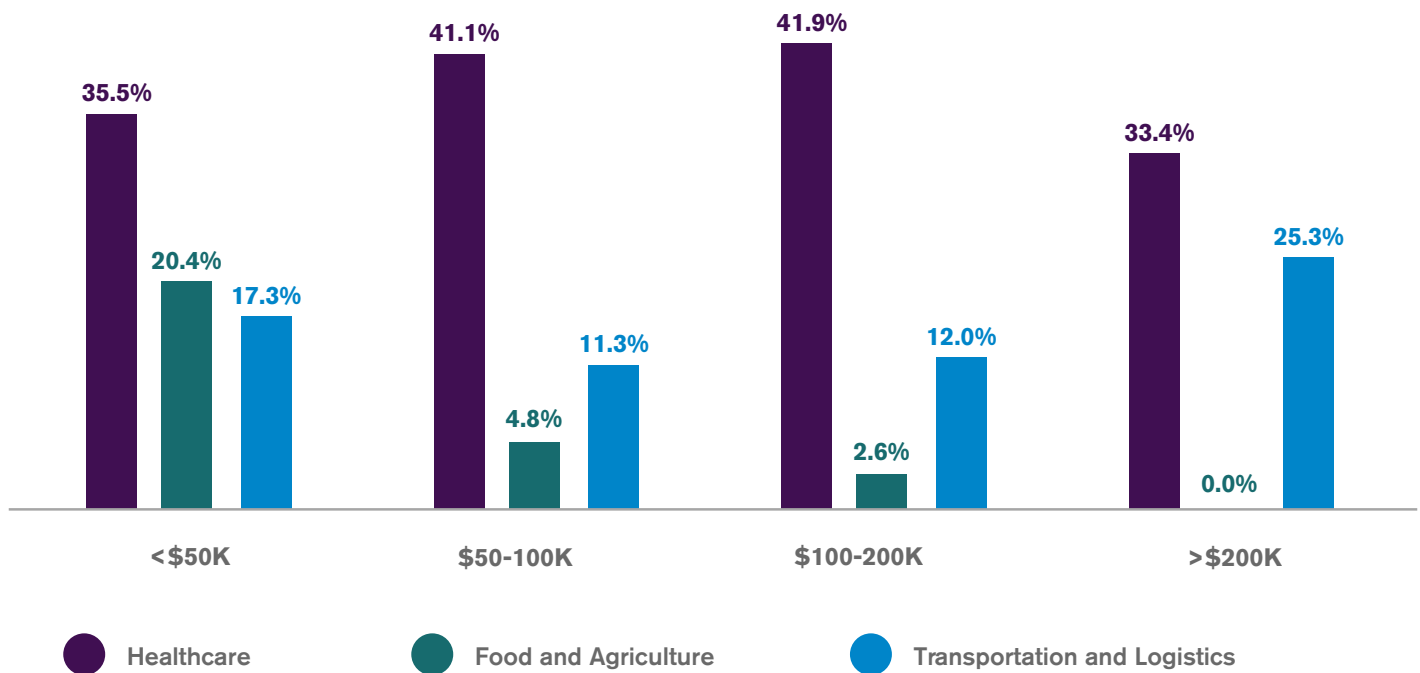
Source: Metrolink April 2020 Customer Survey

The Study included the following goals:

- Identify the historic marginalization and present-day needs of communities in the Metrolink Service area;

- Develop a framework of equity on which Metrolink can base their own goals, decisions, and performance measurement;

- Recommend short-term responses for Metrolink to enhance accessibility and affordability within an equity framework; and

- Develop an analytical tool and performance measures for Metrolink to assess these short-term responses, define "social equity communities[1]"and continue developing longer-term solutions.

To meet these goals, the Study launched a multi-pronged research approach that informed the development of two key outputs: a series of short-term policy and programmatic recommendations intended to enhance accessibility and affordability of the Metrolink system and an analytical tool with accompanying application and measurement guide, grounded in an equitable framework.

Research Approach

The Study consultant team conducted two primary research activities to gain deeper understanding of applicable equity best practices in the transportation sector and what specific tools to enhance accessibility and affordability might be most relevant to Metrolink and the communities the agency serves. First, the team conducted a best practices landscape scan of similar transportation agencies, both in the U.S. and abroad. The purpose was to identify existing

and successful approaches to implementing equity and improving accessibility and affordability of public agency services. Second, the team conducted a series of stakeholder interviews, with Metrolink staff, staff from peer transit agencies, and external stakeholders from targeted Metrolink service area communities. The objective of these research activities was to ground the development of an analytical tool and recommendations produced from this Study with implementation parameters of public agencies as well as lived experiences of community members from some of Metrolink's most historically marginalized service area communities.

Best Practices Scan

While many efforts to implement equity frameworks, initiatives and tools at public agencies worldwide are relatively new, four common best practice categories emerged from this research:

Define Equity

In this Study, "equity" refers to the just administration of goods and/or services. This is different from the equal distribution of resources, which is often used synonymously with equity, but actually perpetuates existing disparities by not addressing historic discrimination and, subsequently, different needs and challenges. Establishing an agency definition of equity is a critical first step to identifying and prioritizing disparate needs and developing appropriate tools and countermeasures.

Develop Equity Tools

Equity tools will often serve as the most immediately visible product of an equity framework and analysis. The best practices research identified a variety of

equity tools that agencies can use to steer decision-making related to how it provides service and develops budgets. Examples include, but are not limited to: questionnaires, toolkits, equity assessments, equity indicators, internal affinity groups, equitable engagement strategies, equitable budget assessments, and atlas/mapping tools.

Implement and Operationalize Equity

Just as government agencies require clear processes and operations of traditional outputs, such as the provision of public transportation service, equity must also be implemented into an agency's operations. Operationalizing equity involves integrating equity into daily tasks, incorporating equity into the working culture, and restructuring the organization to allow equity to steer decision-making. Specific actions for equity implementation identified in the best practices research include: integrating equity goals into every agency program, developing action plans, and building staff capacity to understand and discuss how their work can achieve more equitable outcomes.

Engage Individuals and Communities

Ultimately, a transportation agency's success or failure in addressing inequitable service outcomes can hinge on its ability to understand and respond to the needs of the communities the transportation agency serves. Engagement and outreach are important factors leading to equitable outcomes. This Study's best practices research identifies successful approaches to engagement are focused on ongoing partnerships, not approval for specific projects. Within communities that have been

traditionally underserved, initial skepticism may be likely to even well-intentioned efforts at public outreach. The concept "change moves at the speed of trust," is directly applicable to public agencies and their approach to building partnerships with community members.

For further details and relevant agency examples of these best practices, please review the Research Summary section of this report.

Stakeholder Outreach

In the vast and diverse Southern California region, Metrolink serves a range of communities with varying needs, resources, challenges, and levels of access. In an effort to gain deeper understanding and center the experiences of members from marginalized and vulnerable communities, this Study conducted a series of interviews with representatives from community-based organizations (CBOs) serving the Antelope Valley and Southeast Los Angeles County areas of Metrolink's service area. These interviews were intended to "groundtruth" assumptions and support development of actionable recommendations for Metrolink to enhance accessibility and affordability of their system and to identify any additional barriers faced by community members in these communities. In an effort to center the needs of vulnerable and marginalized communities, the consultant team targeted these areas for outreach due to their higher prevalence of sociodemographic characteristics that tend to experience barriers to access and affordability, such as lower average household incomes and less English language proficiency.

Stakeholder outreach strategy in this Study also sought feedback on the practical application of potential recommendations within a public agency's organizational structure. The consultant team conducted interviews with Metrolink staff, as well as representatives from peer transit agencies to understand specific operations of systemwide fare discount program implementation.

Feedback from these interviews is organized by the most prominent issue areas discussed, including: affordability, digital access, station access, riders' needs and trip purposes, and health and safety.

Affordability

Metrolink has implemented two successful line-specific 25% discount programs across all fares on the Antelope Valley (AVL) and San Bernardino (SBL) lines, which have consistently been identified as serving higher percentages of low-income riders and BIPOC riders, compared to other lines in the Metrolink system. Both lines exhibited increases in ridership each subsequent year after the discounts were applied.

Interviewees agreed that affordability of Metrolink fares is always a consideration and that lower or discounted ticket prices would be welcomed. They also pointed to opportunities for partnerships with other agencies to provide transportation subsidies alongside public benefit programs.

Other affordability considerations also extended to overall household costs, such as the need for affordable housing so that rent and other housing cost burdens do not make other household needs cost-prohibitive, such as transportation.

Access

Limited station access was identified as a barrier, due to both surrounding land uses and lack of multi-modal connectivity. Some interviewees expressed safety concerns when accessing Metrolink stations that are located in predominantly industrial areas or within neighborhoods with disproportionate numbers of closed businesses, deserted public spaces, and criminalized activities. Further, local transit connections in many of these communities identified by interviewees are not frequent or of high-quality service, posing additional barriers to accessing Metrolink stations.

Beyond physical access, Metrolink services can feel "culturally" inaccessible to certain populations or marginalized communities. Generally, Metrolink has an association as a white-collar, office commuter system that may not seem inclusive of riders who do not identify with this demographic.

Digital access was also raised as a disparity issue that has been especially heightened since the COVID-19 pandemic. This came up in reference to obtaining Metrolink information and/or updates pertaining to fares, service, and programs. Specifically, interviewees pointed to disparities in accessing information via mobile applications, social media, and websites, as compared to outdoor advertising or in neighborhood/non-English print publications and non-English television/radio advertisements or public service announcements (related to "cultural" access above).

Riders' needs and trip purposes

Despite the COVID-19 pandemic impacting commuter ridership numbers, Interviewees shared that many community members also continue to rely on Metrolink to access health services, specifically specialty care

and veterans' health care that are not as available in their local communities. Metrolink's schedule that has prioritized service for a traditional "9 to 5" work schedule may exclude riders outside of that commuter profile. In one interview anecdote, a rider had to find a rideshare car for her return trip because the long Metrolink headways would have taken her over two hours to get back to her origin.

Health and Safety

Interviewees shared that transit-dependent riders often feel they must ride in overcrowded conditions that do not reflect pandemic distancing guidelines, but have no other options to go to work or access necessary services. This may mean that transit-dependent riders are not getting the information being disseminated by Metrolink. While there are some valid health and safety concerns that were raised, some of these concerns can also be tied to communication strategies and digital access to information (as noted above).

This Study's multi-pronged research effort led to the development of actionable recommendations outlined in this report. These recommendations should be considered short to medium-term efforts for the agency to undertake to support safe and enhanced accessibility and affordability for existing and potential riders. Further, this Study encourages Metrolink to conduct ongoing stakeholder engagement before, during, and after implementation of any recommendations. As an agency that provides public transportation service and infrastructure, iterative and meaningful relationships with community members who rely on, or might choose to use, Metrolink's services will guide decisions to be more equitable and relevant to the system's end-users.

Recommendations

The Study includes a list of Recommendations, informed by the above Research activities, and intended to be implemented in the short-term to enhance accessibility and affordability of the Metrolink system. Recommendations belong to one of two categories. The first category is intended to help Metrolink establish a framework to center equity and prioritize the needs of marginalized communities. The second category contains recommendations for concrete programmatic actions Metrolink can take in the near term to positively impact accessibility and affordability. The list of Recommendations with brief descriptions are included below, with further detail discussed in the Recommendations section of this report.

Framework and Tools for Equity

Recommendation #1: Adopt Agency Definition of Equity

This report proposes this equity definition (abridged here; in full length in the Recommendations section): Metrolink seeks to establish a service in which the quality of outcomes is not predicated upon an individual's race, ethnicity, gender, socioeconomic status, ability, age, or other cultural or sociodemographic characteristics.

Recommmendation #2: Create an Equity Atlas

The Atlas is a map-based tool to assess the geographic distribution of marginalized communities in the Metrolink service area and will serve as spatial data analysis to deepen understanding of the Metrolink service area communities and inform agency decision-making.

Recommendation #3: Use the Atlas to Define Social Equity Communities for Metrolink

Utilize prioritized sociodemographic characteristics and the Atlas (recommendation #2) to create a definition of prioritized "social equity communities," based on composite scores of the sociodemographic characteristics.

Programmatic Actions to Expand Accessibility & Affordability

Recommendation #4: Adopt Changes to Fare Program to Increase Affordability

Build on previous fare discount programs and implement a 50% low-income fare option (defined by 200% of the Federal Poverty Level) and extend this 50% discount to Senior/Disabled/Medicare rides for passes (to match the existing 50% discount for single rides).

Recommendation #5: Prioritize Station Access Improvements in Social Equity Communities

Utilize the Atlas (Recommendation #2) to identify stations prioritized in the Metrolink Strategic Business Plan located within social equity communities (Recommendation #3) and work with Member Agencies and community-based stakeholders (Recommendation #6) to catalyze station access improvements.

Recommendation #6: Develop New Stakeholder Engagement Approaches

Agencies can re-define engagement success as fostering long-term partnerships with influential CBOs and institutions, rather than community support of (or lack of opposition to) specific projects.

Recommendation #7: Develop Transit Oriented Development (TOD) Criteria

Develop a set of goals and policies around affordable housing and employment needs near Metrolink stations and convene Member Agencies and local jurisdictions to identify implementation mechanisms.

Recommendation Highlight: Equity Atlas

Based on the review of best practices included in this Study, an "Equity Atlas" ("the Atlas") was developed to help Metrolink assess where acute barriers to accessing and affording service currently exist. As demonstrated by other transportation agencies, an atlas can be used to proactively and geographically analyze Metrolink's service area and prioritize investments and programs intended to benefit social equity communities.

A beta version of the Atlas was shared with service planning and executive members of Metrolink staff to obtain feedback and clarify tool functionality. The Atlas is a Geographic Information System (GIS) software tool that provides census tract-level detail for the five counties (Los Angeles, Orange, Riverside, San Bernardino, and Ventura) that comprise the Metrolink Joint Powers Authority. The Atlas can create individual maps showing the prevalence of different community characteristics that can serve as proxies for barriers to accessing or affording Metrolink service. Each of these characteristics visually depicts population data[14] in respective layers. Because the Atlas and its layers are available in GIS format, they can be viewed by the public and also easily made into static map documents.

For instance, if Metrolink staff wanted a geographic representation of households with no cars, the Transportation layer

of the Atlas illustrates, by census tract, the percentage of households reporting access to zero private vehicles. Metrolink staff could elect to visually represent this data in a number of ways. One example might be to represent census tracts where over 50% of households report zero vehicle access, where two colors or shades would be assigned: one to census tracts with 0%-50% zero vehicle households and another to census tracts with over 50% zero vehicle households. The types of colors and color schemes are up to the discretion of Metrolink.

Below is a snapshot of the "composite" map that includes all of the weighted sociodemographic layers, further detailed in the Equity Atlas section of this report. These layers include: race/ethnicity, household income, English language proficiency, educational attainment, youth/children, older adults, vehicle access, rent burden, homeownership rates, 200% below Federal Poverty Level, people with disabilities, pollution burden, and historic redlining. The darker purple areas represent a higher proportion of individuals and households representing more vulnerable or marginalized sociodemographic characteristics, such as lower incomes or higher pollution burden. Representations of existing routes, stations, and three-mile station catchment areas are also illustrated on the Atlas.
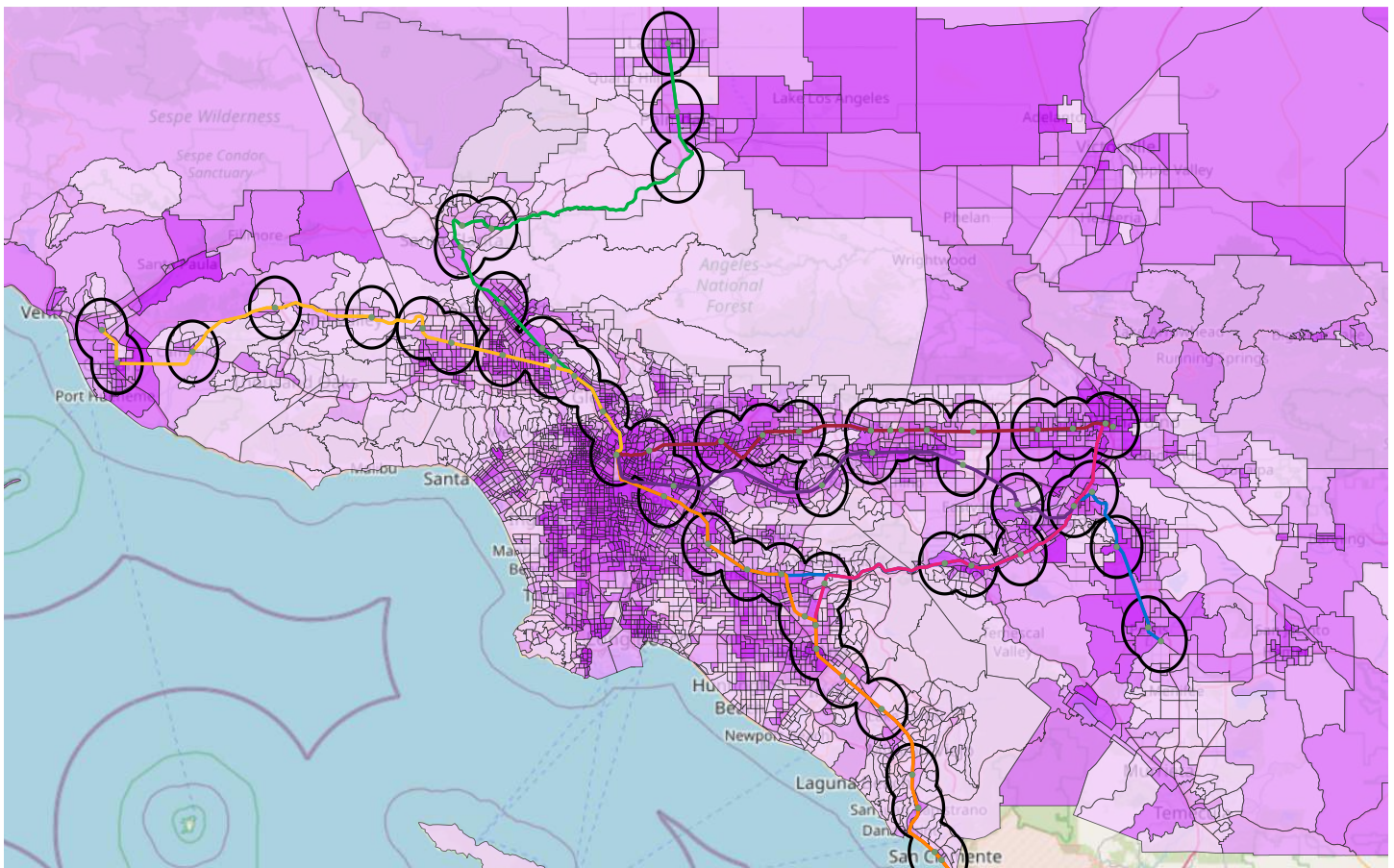
Metrolink has a vast system and service area that spans diverse subregions with disparate resources and existing access to opportunities. The Atlas will serve as spatial data analysis to deepen understanding of the Metrolink service area communities and inform agency decision-making.

Accessibility and Affordability Performance Measures

Based on the research activities described above, suggested performance measures to gauge the efficacy of Metrolink's efforts to enhance accessibility and affordability of its system are categorized under Accessibility, Affordability, and general Equity. In the table below, each category includes an example of performance measures and potential metrics.

Summary of Best Practices Followed by Selected Jurisdictions and Agencies

Category	Performance Measure	Potential Metric(s)
Accessibility	Metrolink accessibility for social equity communities	• Proportion or number of riders representing social equity communities • In-person, surveys conducted in partnership with grassroots organizations or institutions in relevant languages • Average headways at stations serving social equity communities • Proportion of riders who connect to Metrolink by non-private vehicle modes at stations in social equity communities
Accessibility	Elevating and centering perspectives of social equity communities	• Number of ongoing partnerships with community organizations serving social equity communities
Affordability	Metrolink affordability for lower income or fixed-income riders	• Proportion or number of riders utilizing income-based or age-based discount programs • Proportion or number of riders from lower income brackets

Conclusion

In the wake of the urgent days of the early COVID-19 pandemic it is important that public agencies continue their commitment to equity on the path to recovery. The Accessibility and Affordability Study is intended to be an initial step towards implementing equitable goals, tools, and practices at Metrolink.

As a first step, an agency definition of equity and utilization of the Equity Atlas tool to define social equity communities will focus future Metrolink decisions, investments, and programs to benefit the most vulnerable riders and customers within the Metrolink service area. Further, fare program recommendations detailed in this report can be

a short-term strategy to increase accessibility and affordability of the Metrolink system. The Atlas, and all recommendations in this report, are intended to be revisited, assessed and updated on a regular basis.

A commitment to equity is iterative and ongoing. Agency policies or decisions affecting service, ridership, or investments cannot be "neutral" without potentially exacerbating broader existing inequities. Though times change, the fundamental needs of people remain closely the same. Metrolink has a role to play to provide equitable access to resources and opportunities, free from barriers that discriminate against one group more than another, including the ability to safely and inclusively move from one place to another.

INTRODUCTION

In March 2020, the COVID-19 pandemic forced closures, cancellations, and severe adjustments to every aspect of life. Many of these changes have lasted over a year. For Metrolink, this was most significant with an approximately 90% drop in system ridership after social distancing guidelines were enforced in Southern California. Prior to COVID-19, Metrolink was a commuter rail system primarily perceived as a service for high-earning professional workers with traditional "9 to 5" work schedules, and ridership demographics reflected that. Before the pandemic, approximately 85% of Metrolink riders identified as having access to a private vehicle and the average rider income was over $90,000. Metrolink's April 2020 rider survey, collected one month after the pandemic lockdown went into effect,

illustrated a wide shift in ridership demographics: to those who consider themselves to be in essential industries (and strongly skewed towards health care), often without access to a private vehicle, and 40% of whom have annual incomes at or below $50,000. The sudden and widespread transition to remote working for certain professional sectors left Metrolink, as with all transit agencies, to critically respond to the ridership and revenue decreases.

During this time, unprecedented in modern history, the pandemic has repeatedly exposed the existing disparities of our society and has exacerbated health, wealth, and social inequities. Black, Indigenous, Latinx, and Pacific Islander people were, and continue to be, disproportionately more likely

to be hospitalized and die from COVID-19. The economic impacts of business closures, workforce reductions, and frontline workers being forced to choose between their health and their livelihood have worsened existing income inequality. While farebox revenue decreases have caused transit agencies nationwide to cut service, essential workers and other riders who are reliant on transit have never needed a safe, affordable, and reliable source of transportation more than now.

In 2020 we also saw unprecedented uprisings against institutional racism and police brutality across Southern California and the country, seeking justice for communities that have been marginalized, oppressed, and harmed for centuries. Catalyzed by the May 2020 murder of George Floyd by members of the Minneapolis Police Department, these uprisings shone a light on the long overdue need for systemic change, starting with institutions such as corporations and government to examine their role in maintaining a status quo of inequality.

With this context, Metrolink understood the need to examine its service to align with significant changes in ridership and demand. As part of Metrolink's Recovery Plan Framework, the "Triple Bottom Line" emerged as a key strategy—centering "Economy, Environment, and Equity."[2] This strategy positions the agency for a comprehensive approach to recovery. This approach includes a commitment to identifying improvements in accessibility and affordability of Metrolink services and examining how those improvements might better serve Metrolink during ongoing pandemic conditions, and beyond. In Fall 2020, Tamika L. Butler Consulting LLC ("the consultant team") began an Accessibility and

Affordability Study ("Study") with goals to: a) identify the historic marginalization and present-day needs of Metrolink Service area communities; b) develop a framework of equity for Metrolink to base their own goals, decisions, and performance measurement; c) recommend short-term responses for Metrolink to enhance accessibility and affordability within an equity framework; and d) develop an analytical tool and performance measures to initiate these short-term responses.

Equity as a Framework for Accessibility and Affordability

The term "equity" has risen in popularity in recent years, however a widely shared definition is often lacking. "Equity" has a relationship with "equality," but there are key differences in how these concepts are applied to the distribution of resources and services. A critical component of implementing "equity," is the acknowledgement that deep-rooted societal inequalities (racism, classism, sexism, ableism, etc.) and long-held systemic inequities (segregation, discrimination, oppression, etc.) have impacted people differently across social identities (race, class, language spoken, ability, age, etc.). Therefore a response to these differences must be "equitable," and allocate services and resources based on these differences. Allocating "equal" (or identical/same) services and resources across populations does not account for different needs, barriers, assets, and opportunities. In short, "equal" responses can actually exacerbate existing disparities.

For transportation agencies, any effort to meaningfully serve the needs of its most vulnerable riders must be framed with an

equitable analysis. As discussed below, "accessibility" and "affordability" are components of equitable outcomes that can serve as specific categories of policy and programmatic implementation.

Accessibility is defined in this Study as the safe and inclusive ability to acquire or obtain an available resource or opportunity. While transportation agencies often view "access" through a lens of physical mobility and movement, this Study expands that definition to include digital, economic, and cultural access, as well. These issues can impact access to Metrolink services, as well as necessary elements of livelihood: jobs and economic opportunity, education, as well as housing and shelter.

Affordability can be understood as a subset of accessibility. If transit is not affordable, cost becomes a major barrier to an individual's ability to access that transit. For this Study, "affordability" is defined as the ability to use a service without undue cost burden on other key necessities. It extends beyond the pure pricing of transit service and includes housing, education, health expenses. In addition, affordability relates to connectivity to other transit and social service providers.

Both accessibility and affordability are critical strategies to addressing COVID-19 pandemic impacts. Developing these strategies must be accompanied with a full equity framework or risk perpetuating new and existing inequities. No policy or decision affecting service, ridership, or investments is neutral because underlying systems and social conditions that impact these policies and decisions are not neutral themselves. This report approaches an analysis

to accessibility and affordability through an equity framework with core considerations that include: historical analysis and consideration, existing social disparities (including race), and a proactive, "not neutral" approach to addressing inequity.

This report employs multiple research strategies, including a best practices scan, interviews with Metrolink and peer agency staff, and interviews with community stakeholders in targeted Metrolink service area communities. Findings from these activities have been used to develop two key outputs:

- Series of short-term policy and programmatic recommendations intended to enhance accessibility and affordability of the Metrolink system

- Analytical tool with accompanying application and measurement guide, based on an equitable framework

One year after the pandemic lockdown, our nation and region are seeing incremental, but hopeful, signs of recovery. Vaccination eligibility and dissemination continue to increase, surviving small businesses are cautiously expanding services, and public school districts are attempting to reopen while balancing ongoing health and safety precautions. For many transit agencies, returning ridership levels to pre-COVID levels will be a priority goal. This report seeks to identify tools and practices that not only build back strong ridership, but also expand and maintain transportation equity and increase accessibility and affordability for those with the fewest mobility options.

Report structure

In the following sections, this report will:

- Summarize research findings from a best practices scan and series of stakeholder interviews.

- Outline how these findings informed the development of seven recommendations to implement equity and enhance accessibility and affordability at Metrolink, including creation of an Equity Atlas.

- Provide a detailed description of the Equity Atlas and its recommended utilization.

- Culminate with a look ahead to future equity efforts at Metrolink.

RESEARCH SUMMARY

Case Studies and Best Practices

The Study consultant team conducted two primary research activities to gain deeper understanding of applicable equity best practices in the transportation sectors and what specific tools to enhance accessibility and affordability might be most relevant to Metrolink and the communities the agency serves. First, the team conducted a best practices landscape scan of similar transportation agencies, both in the U.S. and abroad, to identify existing and successful approaches to implementing equity and improving accessibility and affordability of public agency services. This culminated in a Best Practices report to summarize case studies and findings. The Executive Summary of the Best Practices report can be found in Appendix 1. Second, the team conducted a series of stakeholder interviews, with Metrolink staff, staff from other transit agencies, and external stakeholders from targeted Metrolink service area communities. The objective of these research

activities were to ground the development of an analytical tool and recommendations produced from this Study with implementation parameters of public agencies as well as lived experiences of community members from some of Metrolink's most historically marginalized service area communities. The following sections summarize highlights from each research activity.

Best Practices Findings Summary

Many public agencies identified in the Study's best practice research, and in cities across the country, have committed to implementing equity frameworks, initiatives, and tools. However, many of these efforts are relatively new, having been introduced in the past few years. Four common best practice categories emerged from this research: Define Equity, Develop Equity Tools, Implement and Operationalize Equity, and Engage Individuals and Communities.

Define Equity

In this Study, "equity" refers to the just administration of goods and/or services. This is different from the equal distribution of resources, which is often used synonymously with equity, but actually perpetuates existing disparities by not addressing historic discrimination and, subsequently, different needs and challenges. Establishing an agency definition of equity is a critical first step to identifying and prioritizing disparate needs and developing appropriate tools and countermeasures.

The best practices research further identified guiding principles to develop a clear, shared definition of equity: lead with race, center intersectionality, be clear about causes of inequity and what equity "isn't," identify distinct barriers faced by different communities, and develop guiding principles.

Relevant agency examples:

- The Los Angeles County Metropolitan Transportation Authority ("LA Metro"), a Member Agency to Metrolink, adopted its first Equity Platform framework in 2018. The Equity Platform led to the development of an internal definition of equity, which has led to the development of a Rapid Equity Assessment Tool, geographically-defined Equity Focus Communities, and current development of equity analytical tools that impact budget, agency workforce, and key agency investment decisions.

  + LA Metro equity definition (abridged for brevity): "Equity is both an outcome and a process to address racial, socioeconomic, and gender disparities, to ensure fair and just access to opportunities."

- The Oakland Department of Transportation ("OakDOT") was created during a 2016 agency reorganization, at the same time the City of Oakland was creating the first municipal Department of Race and Equity in California. During these processes, OakDOT received a substantial amount of feedback from residents that equity needed to be central within the new department. As a result OakDOT worked closely with the Department of Race and Equity to develop its Geographic Equity Toolkit.

  + OakDOT definition of equity: "In Oakland, the City defines equity as fairness. It means that identity—such as race, ethnicity, gender, age, disability, sexual orientation or expression—has no detrimental effect on the distribution of resources, opportunities and outcomes for our City's residents."

Develop Equity Tools

The best practices research highlighted a variety of equity tools that agencies can use to steer decision-making related to how it provides service and develops budgets. Examples include, but are not limited to: questionnaires, toolkits, equity assessments, equity indicators, internal affinity groups, equitable engagement strategies, equitable budget assessments, and atlas/mapping tools.

Equity tools will often serve as the most immediately visible product of an equity framework and analysis. As a result, they also provide agencies with an opportunity to turn complex data into easy-to-understand points and arguments for proactively pursuing equity. As with the process of defining equity, much of toolkit development is specific to the functions that the agency performs and the communities it seeks to serve. It is strongly recommended that tool development be combined with stakeholder engagement, both internally within the agency and externally with community members who are likely to be impacted by tool implementation.

Relevant agency examples:

- After a Mayoral directive to center equity in its work and processes, the City and County of Denver Office of Transportation and Infrastructure ("DOTI") set out to develop an equity tool that would allow the agency to assess how well it was directing resources to marginalized communities. The DOTI Equity Index is a graphical, map-based tool that expands on an existing map-based tool, the Denver Neighborhood Equity Index, by incorporating sociodemographic and transportation indicators to the analysis. Examples of these new "equity indicators" include: population share of nonwhite households; share of households below the poverty line; share of population with less than a high school diploma or equivalent; households without a vehicle; share of population with a disability; and population with Limited English Proficiency.

  + A primary goal and function of the DOTI Equity Index is to apply equity earlier in the planning process.

  + The Equity Index was established in 2020 and direct impacts are currently under review. The department has commitment to an annual review process to identify opportunities to iterate and refine the tool for equity impacts.

- As of December 2020, the Central Puget Sound Regional Transit Authority ("Sound Transit") in Seattle, Washington has three equity tools in development: the Racial Equity Tool, the Equitable Engagement Tool, and the Budget Equity Tool. None had been finalized by completion of this Study's best practices research. The tools are meant to be utilized in concert, with the engagement tool defining and informing engagement techniques that can be utilized in application of the Racial Equity and Budget tools.

  + The Racial Equity Tool will involve a place-specific analysis of the "intended impact" of a project on marginalized communities, along with the historical causes of inequity in those communities. The tool will then involve the measurement of quantitative and qualitative data regarding actual impacts on marginalized communities and tracking of selected indicators to encourage greater equity through the life of a project.

- King County in Washington state, while not a transit agency, has been at the forefront of developing equity tools to analyze and improve equity outcomes. In 2012 King County began using an Equity Impact Review (EIR) tool, which "merges empirical (quantitative) data and community engagement findings (qualitative) to inform planning, decision-making and implementation of actions which affect equity in King County."

  + The EIR tool includes a checklist to scope the positive or negative impacts of an action on marginalized communities and includes comprehensive guidance for community engagement.

  + During the COVID-19 pandemic, the EIR tool has been supplemented with the creation of an Equity Impact Awareness (EIA) tool, a short questionnaire that centers race, economic status, and age, to guide organizational decisions and allow for more rapid responses during the emergency period without sacrificing equitable decision-making.

Implement and Operationalize Equity

Discussion and definitions of equity, and components of equity such as accessibility and affordability, are critical first steps towards improving equity outcomes of public agencies. However, just as government agencies require clear processes and operations of traditional outputs, such as the provision of public transportation service, equity must also be implemented into an agency's operations. Operationalizing equity involves integrating equity into daily tasks, incorporating equity into the working culture, and restructuring the organization to allow equity to steer decision-making.

Because a critical understanding of social disparities and inequities requires knowledge of historic discrimination and exclusion, successful implementation of equity tools and initiatives requires a proactive effort. Agencies must seek to reduce and remove barriers that have existed for so long that they are part of the status quo. Misguided attempts at equity, such as dividing resources equally, actually maintain inequitable conditions because underlying causes and challenges are not addressed.

For equitable assessments, initiatives, and tools to be effective, this commitment to rethinking practices and assumptions must become an integral part of an agency's process and not relegated to special projects or committees. Specific actions for equity implementation identified in the best practices research include: integrating equity goals into every agency program, developing action plans, and building staff capacity to understand and discuss how their work can achieve more equitable outcomes.

Relevant agency examples:
- Responding to direction from the Mayor, the San Francisco Municipal Transportation Agency ("SFMTA") developed and released a draft Racial Equity Action Plan, which includes equity action items for furthering departmental goals. The first phase of the Action Plan focuses on internal changes, whereas a second phase will focus on public-facing action items.

  + All individual actions are also assigned a timeline with measurable milestones to completion. A three-tiered priority is assigned to each action relative to the other actions required to achieve

a given objective. Each action is graded based on the resources that will be required to achieve it, including whether completion of the work can be reached with existing resources or requires new resources to be allocated.

+ As of December 2020, the Action Plan was still being refined. In particular, SFMTA is seeking to disaggregate data by race to the greatest extent possible to allow for the analysis of disparities within city service outcomes in a more fine-grained manner and help SFMTA better tailor programs to existing needs.

- In King County, Washington, affinity groups (also called "employee resource groups") have been established around distinct issues that affect employees belonging to protected categories as defined by applicable federal, state, and local laws, such as race/ethnicity, gender, and/or sexual orientation. These groups provide a space for employees to share concerns about inequity in the workplace. They also provide a potential avenue for the development of new strategies in pursuing equitable outcomes.

+ At OakDOT, affinity groups have successfully led to the development of a minimum threshold for how much time the department director must spend performing outreach in marginalized communities.

Note: While a significant way agencies can develop a culture of operationalized equity is by supporting its personnel to lead the way, it is also important that the burden for internal organizing and emotional labor

of addressing equity not fall exclusively on groups that have historically been and continue to be subjected to discrimination and exclusion. To disperse responsibility of equity implementation, King County also has an official Antiracist White Action Group. This group functions similarly to the other affinity groups, by "helping white employees... constructively engage in change" and "[work] to change systems of oppression that benefit white people."

Engaging Individuals and Communities

Ultimately, an agency's success or failure in addressing inequitable service outcomes can hinge on its ability to understand and respond to the needs of the communities the transportation agency serves. Research and interviews have consistently identified engagement and outreach as drivers in successful efforts to operationalize equity, and almost any transportation project manager has experienced the flip side of this coin: lack of meaningful and responsive engagement can completely derail a fully planned, designed, and funded project. Within communities that have been traditionally underserved, scars of past and present exploitation and broken promises are likely to fuel initial skepticism to even well-intentioned efforts at public outreach. The concept "change moves at the speed of trust," is directly applicable to public agencies and their approach to building partnerships with community members.

While efforts to engage community members and other external stakeholders are often initiated by a project or, in some cases, to address an agency misstep, this Study's best practices research identifies successful approaches to engagement focus on ongoing partnerships, not approval for

specific projects. Communities are complex and unique. There is no one-size-fits-all approach to engagement, just as long-term partnerships are relationships that must be customized for cultural and communication variations and committed to meet people where they are. Further, the expertise and knowledge that community members and organizations possess of their neighborhoods and needs are directly applicable and just as valuable to public agencies as traditional "technical" expertise of consultants, and should be compensated at a similar rate.

Relevant agency examples:

- One example of best practices is within the public healthcare system. The Centers for Medicare and Medicaid Services within the United States Department of Health and Human Services has developed a toolkit for culturally competent translation in order to better serve recipients of its services.

  + The toolkit highlights that many concepts will not have a direct equivalent in the reader's cultural context. For example, clients born and raised in other countries may "have trouble understanding the concept of a health plan" as in their experience "health care is organized, delivered, and paid for in ways that are very different from the American system."

- King County, Washington's Equity and Social Justice Plan (2016-2022) lays out strategies for conducting outreach that alleviate access barriers. Among these, King County partners with community groups that have existing relationships with marginalized communities, advertises events and job openings in diverse locations, and has created an outreach tool intended for use by all departments.

- SFMTA found that when collaborating with community-based organizations, more community members attended outreach events. SFMTA is incorporating the outreach process for the Equity Strategy into a longer-term strategy for maintaining relationships by "building a contact list of riders on Equity Neighborhood routes, attending existing community events and CBO meetings, and relying on onboard outreach."

- Cultural competency is not limited to linguistic or national barriers. The Behavioral Health Care Services department of Alameda County, California has found that Black people throughout the state receive behavioral health care services at a "disproportionately higher rate than other ethnic communities, and these services are provided in extremely restrictive (often involuntary) settings such as hospitals and jails."

  + The department determined this significant use of services, along with disproportionately negative mental health outcomes in the community was a sign that service is not properly tailored to the needs of African Americans. To address this issue, the department has focused on developing the cultural competency to better serve Black communities. This approach involved recognizing the importance of individual faith and spirituality among Black community members and building relationships with faith organizations.

  + The department has also highlighted that acknowledging the particular historical traumas African Americans

face in surviving anti-Blackness is essential for adequately addressing their needs. This points to a necessity to be culturally competent and go a step beyond that towards being culturally specific.

The breadth of best practices review conducted in this Study and summarized above comprises a comprehensive and critical analysis of assumptions about who uses the agency's services and what role it can play in serving marginalized communities. Transit agencies across the country were upended as a result of the COVID-19 pandemic. Disastrous events exacerbate existing inequities and, as peer agencies have stated, it is crucial to preserve and prioritize equitable decision-making processes in emergency and beyond response periods.

Stakeholder Outreach Highlights

Metrolink's service area is expansive and stations are located in six Southern California counties. Being a diverse region, Metrolink serves a range of communities with varying needs, resources, challenges, and levels of access. In an effort to gain deeper understanding and center the experiences of members from marginalized and vulnerable communities, this Study conducted a series of interviews with representatives from community-based organizations (CBOs) serving the Antelope Valley and Southeast Los Angeles County regions of Metrolink's service area. As described in the Best Practices Findings Summary above and the Best Practices Report Executive Summary (Appendix 1), community engagement is critical at all stages of implementing equity and ensuring that any improvements to accessibility and affordability are aligned with the needs

of marginalized communities. The goals of these interviews were to "groundtruth" assumptions in developing actionable recommendations for Metrolink to enhance accessibility and affordability of their system and to identify any additional barriers faced by community members in these communities. These communities were selected based on the average income of riders on the Antelope Valley and San Bernardino lines being the two lowest on the Metrolink system, as well as the communities in Southeast Los Angeles, which also exhibit vulnerable sociodemographic characteristics such as lower average household incomes and English language proficiency. A list of interviewed organizations is included in Appendix 2.

The stakeholder outreach strategy of this Study also sought feedback on the practical application of potential recommendations within Metrolink's organizational structure. The consultant team conducted interviews with members of Metrolink's research, service planning, customer experience, market insight and analytics, and integrated data and technology services, teams to gain insight into previous efforts to enhance accessibility and affordability, as well as current activities that could provide alignment with Study recommendations. Further, the consultant team interviewed representatives from peer transit agencies to understand specific operations of system-wide fare discount program implementation. Names of Metrolink staff and peer agency staff included in these interviews are listed in Appendix 2.

Due to the ongoing COVID-19 pandemic and subsequent distancing guidelines, all outreach interviews were conducted via virtual teleconferencing or phone calls.

Feedback from these interviews is organized by the most prominent issue areas discussed, including: affordability, digital access, station access, riders' needs and trip purposes, safety and stigma.

Affordability

Metrolink has implemented two successful line-specific 25% discount programs across all fares on the Antelope Valley (AVL) and San Bernardino (SBL) lines. Both lines saw steady and significant increases in ridership that increasingly offset revenue shortfall funding each subsequent year after the discounts were applied.

Interviewees agreed that affordability of Metrolink fares is always a consideration and that lower or discounted ticket prices would be welcomed. They also pointed to opportunities for partnerships with agencies to provide transportation subsidies along with other services, such as CalWorks, Mental Health America, or coordinated entry programs.

Other affordability considerations also extended to overall household costs, such as the need for affordable housing so that rent and other housing cost burdens do not make other households needs cost-prohibitive, such as transportation.

Access

Limited station access was identified as a barrier, due to both surrounding land uses and lack of multi-modal connectivity. In the Antelope Valley, stations are not primarily in or near densely residential areas. Interviewees also brought up safety perceptions in accessing Metrolink stations that are located in predominantly industrial areas or within neighborhoods with disproportionate numbers of closed businesses, deserted

public spaces, and criminalized activities. In Southeast Los Angeles County, Metrolink stations are limited and not easy to get to from many residential communities (Union Station and Commerce). Further, interviewees noted that local transit connections in many of these communities are not frequent or of high-quality service, posing additional barriers to accessing Metrolink stations. For instance, the Commerce station is located in a heavily auto-centric, industrial neighborhood and adjacent to the I-5 freeway, with very limited local transit connections within less than ¾ mile.

Beyond physical access, Metrolink services can feel "culturally" inaccessible to certain populations or marginalized communities. Generally, Metrolink has an association as a white-collar, office commuter system that may not seem inclusive of riders who do not identify with this demographic. For instance, community members do not see Metrolink services advertised in non-white communities or in non-English language media (television programming, radio, and print publications). A lack of Spanish language advertisements in trusted Spanish language channels/mediums was cited as an example of cultural inaccessibility. One interviewee shared an example that rather than try to figure out how to access the closest Metrolink station in her neighborhood, she would prefer to take one of the buses commissioned by private bus companies (e.g. Tap Royal, Tufesa) that primarily cater to Spanish-speaking travelers at generally lower ticket prices than other public transportation options.

Digital access was also raised as a disparity issue that has been especially heightened since the COVID-19 pandemic. This came up in reference to obtaining Metrolink

information and/or updates pertaining to fares, service, and programs. One interviewee stated that up to 20% of residents in Southeast Los Angeles do not have reliable access to the internet and the Southern California Association of Governments (SCAG) Racial Equity Baseline Conditions Report (2021) finds that 18% of Black residents and 19% of Latino/Hispanic residents in the SCAG region do not have access to high-speed internet.[15]

Riders' needs and trip purposes

Metrolink ridership has significantly decreased due to the COVID-19 pandemic, with a February 2021 online rider survey (with over 10,000 valid responses) showing that 75% of riders still using the system are essential workers. However, interviewees from this Study's CBO outreach also shared that many essential workers have also become unemployed, but that community members continue to rely on Metrolink to access health services, specifically specialty care and veterans' health care that are not as available in their local communities.

In particular, the stakeholders from Antelope Valley (AV) pointed to their area's significant unhoused veterans population that requires transit trips to access veterans services in the San Fernando Valley and the Veterans' Administration in West Los Angeles. Similarly, housing programs such as Project Roomkey, which was launched to repurpose hotels and motels for unhoused residents' needs after the onset of the COVID-19 pandemic, links recently sheltered residents to services. Many of these services are located outside of the local communities where Project Roomkey hotels are located and also require trips on Metrolink between housing and support services.

Metrolink's schedule that has prioritized service for a traditional 9a-5p work schedule may also exclude riders outside of that commuter profile. One interviewee shared the only time she took Metrolink she had to find a rideshare car for her return trip because the long headways would have taken her over two hours to get back to her origin.

Health and Safety

The February 2021 Metrolink online survey also overwhelmingly cited health and sanitation concerns, particularly around the containment of COVID-19 as top priorities for riding the Metrolink system. Yet interviewees shared that transit-dependent riders often feel they must ride in overcrowded conditions that do not reflect pandemic distancing guidelines, but have no other options to go to work or access necessary services.

Community organization staff also cited perceptions of personal safety as barriers when accessing certain Metrolink stations and when encountering stigmatized riders, including unhoused individuals and previously incarcerated individuals (given the proximity of the Antelope Line to the California State Prison in Lancaster). Interviewees were also quick to point out that unhoused and previously incarcerated individuals are often stigmatized by security officers, and society at large, and discussed the need for services rather than additional law enforcement presence.

Research Next Steps

This Study's overall combined research of a best practices industry scan and targeted conversations with Metrolink staff and representatives from grassroots CBOs revealed that while the development of equity-related

tools within the transportation industry are relatively recent, disparate barriers to safe and affordable travel for marginalized communities and frontline workers have long existed prior to COVID-19, only to become exacerbated during the pandemic. Peer agencies who have emerged as equity leaders in the transportation sector have found balance with a thoughtful equity framework that supports a suite of practical tools and programs, including robust community engagement, to best serve marginalized communities that may rely on their transit service.

This Study's research effort led to the development of actionable recommendations outlined in the next section of this report. These recommendations should be considered short- to medium-term efforts for the agency to undertake to support safe and enhanced accessibility and affordability for existing and potential riders.

When pandemic distancing guidelines are relaxed and safe in-person convenings once again become more prevalent, this Study encourages Metrolink to conduct ongoing stakeholder engagement before, during, and after implementation of any recommendations. As an agency that provides public transportation service and infrastructure, iterative and meaningful relationships with community members who rely on, or might choose to use, Metrolink's services should guide decisions to be more equitable and relevant to the system's end-users.

RECOMMENDATIONS

Recommendations

The accessibility and affordability of the Metrolink commuter rail system can be enhanced in the short-term by implementing the following initial policy and program Recommendations. Recommendations belong to one of two broad categories. The first category is intended to help Metrolink establish a framework to center equity and prioritize the needs of marginalized communities. The second category contains recommendations for concrete programmatic actions Metrolink can take in the near term to positively impact accessibility and affordability.

As described in the Research Summary section, peer transportation agencies also analyze and implement programmatic interventions within an adopted equity definition and/or framework.

The following recommendations were generated after various conversations with the Metrolink project management team and the research and outreach activities described in the preceding Research section of this report. The consultant team provided deep background on this work in the previously shared Best Practices report, which is summarized in this report. For a deeper dive on any of these recommendations we suggest cross-referencing that report or reviewing the Best Practices Report Executive Summary located in Appendix 1.

Quick Glance Recommendations

Framework and Tools for Equity

1 Adopt Agency Definition of Equity

2 Create an Equity Atlas

3 Use the Atlas to Define Social Equity Communities for Metrolink

---

Programmatic Actions to Expand Accessibility & Affordabiliity

4 Adopt Changes to Fare Programs to Increase Affordabilitiy

5 Prioritize Station Acccess Improvements in Social Equity Communities

6 Develop New Stakeholder Engagement Approaches

7 Develop Transit Oriented Development (TOD) Criteria

Adopt a Framework and Tools for Equity, Accessibility, and Affordability

The first step to making equity actionable at any organization is ensuring that those involved in equitable organizational culture change clearly understand what is meant by the organization when it uses the term "equity." After defining equity, Metrolink should create an equity-based atlas to visually map the service areas with the most need—based on priorities identified by the organization. After creating the atlas, it should be utilized to define "social equity communities." All definitions and maps created should be reviewed internally and with external stakeholders to "groundtruth" assumptions made by Metrolink staff and the consultant team. The definitions and the atlas should be updated as needed pursuant to community feedback and changing conditions.

1 ADOPT AN AGENCY DEFINITION OF EQUITY

As the transit ridership landscape throughout Southern California continues to change in the wake of the COVID-19 pandemic, Metrolink has identified accessibility and affordability as strategic agency values. Accessibility and affordability, defined below, are two components of a broader equity framework that Metrolink can utilize to better position itself to serve historically marginalized communities and to help achieve just outcomes for the riding public.

Accessibility and affordability are components of equity, and critical to a process of prioritizing just outcomes in the distribution of services and opportunities. In order for Metrolink to position itself as an equity-centered agency, we propose the following interim equity definition for the organization:

Accessibility

Refers to the ease with which an individual can connect to common necessities like transit, jobs, education, housing and healthcare. Accessibility can be limited by barriers physical or otherwise, and not all barriers will necessarily impact all passengers the same way. Examples of barriers to access can include insufficient station lighting, a lack of wheelchair ramps, monolingual signage, or even unexplained local cultural norms around riding.

Affordability

Can be understood as a subset of accessibility. Transit that is not affordable is not accessible. Affordability refers to more than just the cost of a fare. It also refers to the ability of an individual to access a service without incurring undue pressure on the ability to procure other necessities such as housing, education or healthcare.

It should be noted that the above definition serves as an interim definition of equity. It is strongly recommended that any final definition of equity, including accessibility and affordability, be groundtruthed by engaging members of marginalized communities to ensure the definition meets their needs and values (see Policy Recommendation #6 below).

Equity at Metrolink

Metrolink seeks to establish a service in which the quality of outcomes is not predicated upon an individual's race, ethnicity, gender, socioeconomic status, ability, age, or other cultural or sociodemographic characteristics.

Metrolink finds that the pursuit of equity outcomes requires: a) acknowledgment of historic and present-day harms that have fueled and continue to produce social disparities; b) ongoing engagement with

leadership from marginalized groups to identify social barriers, disparities, community values, and assets; and c) proactive identification and dismantling of inequities, which form barriers to just and fair outcomes and access to opportunities, such as housing, employment, education, and health services.

Metrolink acknowledges that equity is both a process and an outcome that facilitates access to opportunities. What that process and outcome look like are dependent on the particular context of a community, but should always center on listening to and including the people most impacted by what process is being undertaken and what outcome is being pursued.

2 CREATE AN EQUITY ATLAS FOR METROLINK DECISION-MAKING

As described in the Research Summary section, there are many different types of tools currently in use by Metrolink's peer agencies to address issues of equity, affordability, and accessibility. These include, but are not limited to: equity assessments, equity indicators, internal affinity groups, equitable engagement strategies, equitable budget assessments, and atlas/mapping tools.

The Atlas is a map-based tool to assess the geographic distribution of marginalized communities in the Metrolink service area (see Policy Recommendation #3 below). Other agencies that have utilized an atlas, or other geographic analysis of sociode-mographic disparities and marginalization, are able to quickly illustrate how decisions such as service and capital planning, budget allocations, or station construction and maintenance may benefit or burden specific communities and populations. Metrolink has a vast system and service area that spans diverse subregions with disparate resources and existing access to opportunities. The Atlas will serve as spatial data analysis to deepen understanding of the Metrolink service area communities and inform agency decision-making.

Please see the following section, "Equity Atlas," for further details.

Equity Atlas Units of Measurement (Layers)

Units of measurement, or layers, in the mapping tool include: race, disability status, income, English language proficiency, age of populations (to capture youth and older adults), homeownership rates, formerly rent burden, educational attainment, pollution burden, 200% of Federal Poverty Level redlined communities, and vehicle access.

Metrolink should focus future development of the tool to be interactive and transparent to better clarify the methodology. This would allow Metrolink staff to deploy the tool at their convenience and need, with the opportunity for widespread adoption in the agency.

3 DEFINE SOCIAL EQUITY COMMUNITIES FOR METROLINK

In order for transportation investments to strengthen communities and increase economic resilience, agencies must prioritize resources in areas with the greatest need. As referenced in the Executive Summary of this report, the term "social equity communities" is often used by agencies as a general term to refer to socio-demographic communities that have collectively experienced historic social, economic, and political discrimination, which has created current inequities and continued marginalization and which warrant policy attention. In this report, the consultant team explored the methodology to tailor a definition of social equity communities for Metrolink by visualizing these socio-demographic communities as geographical concentrations across the Metrolink service area. While creating the

Atlas, we recommend Metrolink determine agency priorities and outcomes to assign different scores, or weights, to analyzed population characteristic layers (see Policy Recommendation #2 above). Guided by these priorities and scores, Metrolink and the consultant team can then formulate a definition of social equity communities that combines geographic concentration and social demographic group inequities to create a spatial-social intersectional definition of social equity communities.

Geographic-based definitions of social equity communities are one of the most common applications of defining historically marginalized groups, particularly for the built environment. Many disparities exist on a geographic basis, such as income brackets

and chronic health conditions. This is due to discriminatory built environment policies and practices that were also applied on a geographic scale, such as redlining, freeway expansion and toxic exposure, exclusionary zoning, and disinvestment from both the public and private sectors in neighborhoods with non-white populations and lower income households.

However, when only looking at single social characteristics across geographic regions, many people with high need can be ignored because some marginalized groups may be more evenly distributed across geographies than others. For example, older adults or people living with disabilities are likely to face barriers to access and affordability regardless of whether they live in lower income or affluent neighborhoods. The Atlas provides flexibility for Metrolink to identify intersecting demographics of marginalized groups, such as disability and income, to prioritize characteristics and define geographic-based social equity communities.

Social Equity Community in Metrolink Service Area

Metrolink should develop a definition of social equity community that identifies needs based on the geographic prevalence and/ or concentration of selected socio-demographic characteristics. This would allow Metrolink to incorporate intersectional identity into its definition of social equity community, including how contemporary spatial trends of race/ethnicity, income, etc. overlap with historic discriminatory policies. Analyzing these intersecting demographics is a key component to implementing equity and supporting any initiative focused on accessibility and affordability.

It should be noted that the above serves as the framework for a definition of social equity community in the Metrolink service area. It is strongly recommended that this framework be further fleshed out and Metrolink fully name the factors (e.g., race, age, income, historic exclusion, etc) that should be prioritized based on learnings garnered from the creation of the Atlas. The Atlas-informed definition of social equity community should then be groundtruthed by engaging members of marginalized geographic, socioeconomic, and cultural communities to ensure the definition meets their needs and values (see Policy Recommendation #6 below).

Please see Appendix 3 for a proposed set of demographic indicators to be used in creating the Atlas and shaping the definition of social equity community.

Accessibility and Affordability Programmatic Recommendations

The following set of recommendations focus on concrete actions that Metrolink can take to address accessibility and affordability challenges to its system and surrounding landscape in the short-to-medium term. Examples of peer agencies pursuing similar recommendations are listed in Appendix 4.

4 ADOPT CHANGES TO FARE PROGRAM TO INCREASE AFFORDABILITY

Fares paid by customers at the point of service are both a revenue stream for public transportation agencies and a key determinant of system accessibility and affordability. Globally there is extreme heterogeneity in the fare structures utilized by transport agencies. This diversity reflects the array of administrative structures, infrastructure and cultural contexts in which public transportation agencies tend to operate.

At Metrolink, for example, a variety of fare products are available, including single trips, round trips, weekly passes, monthly passes, and corresponding discounted fares for children (including the Kids Ride Free on Weekends program), seniors, veterans, and people with disabilities. Metrolink also offers a Quality Service Pledge (QSP) that each

system line will execute no less than 85% on-time performance in any given calendar month. If riders on any line experience monthly on-time performance at any rate less than 85%, they receive a flat 25% discount for all rides on that line on top of any other fare structures and discounts in the following month. Further, the two system lines with lowest average income riders, Antelope Valley (AVL) and San Bernardino (SBL, have a flat 25% discount on all fares for riders of those two lines. These line-specific discounts were separate programs with similar goals of boosting ridership on these two lines in 2015 (AVL) and 2018 (SBL). During the pandemic, Metrolink has also introduced a new five-day flex pass to allow for less frequent travel at a discount.

Based on staff interviews summarized in the Research Summary section, Metrolink is currently developing a Fare Strategy Study. According to its scope of work, a primary goal of the Fare Strategy Study is to formalize a fare strategy that modernizes business practices and is aligned with the CEO's customer-first vision. The Fare Strategy Study will assess Metrolink's fare structure, policies, and fare collection systems and technologies and identify optimizing opportunities, such as improving the customer experience, minimizing operating and maintenance costs, increasing levels of service, improving planning capabilities and enhancing available management information.

Serving as a baseline for Fare Strategy Study are the Metrolink Fare Policy Goals and Guiding Principles, which were adopted by the Metrolink board in October 2020 (see Appendix 5).

The research conducted by the consultant team has found there are many different targeted interventions that transit agencies can and do implement in order to improve the accessibility and affordability of regional transportation for riders. Examples of fare strategies used globally are listed in Appendix 6.

Fare program recommendations below build upon the existing Fare Policy Goals and Guiding Principles and are also recommended for consideration and coordination with ongoing development of the Fare Strategy Study. In particular, the fare policy goals and principles to Recover and Grow Ridership (Encourage sustainable ridership growth through customer-focused fare policies) and Ensure Equity (Apply discounts based on ticket type and rider type consistently across all lines), are reflected in the

recommendations to expand fare discounts to low-income and senior/disabled/Medicare riders. Metrolink's own 25% reduced fare program on the AVL yielded significant ridership increases (29% increase three years after discount implementation), nearly half of which were "infrequent" riders purchasing one-way and roundtrip tickets. Further, ridership for students, youth, seniors, and riders with disabilities during the initial study period increased by 53%[3]. While both the AVL and SBL 25% discount programs required initial subsidies to augment the dip in fare revenue from the discounted prices, the increase in ridership actually reduced the revenue funding shortfall each year after fare discount implementation and reached revenue-neutrality after just three years[4]. Similarly, the 2018 SBL discount led to increased ridership and reduced revenue shortfall, until the 2020 pandemic led to drastic drops in ridership at Metrolink and other transit agencies worldwide.

Based on this Study's best practices research, the following recommendations are suggested to increase Metrolink affordability.

50% Discount Program For Low-Income Riders

Create a systemwide fare product for riders with a household income at or below 200% of the federal poverty line, which Metrolink currently uses as a definition for low-income riders. In an effort to reduce barriers to enrollment, eligibility verification could be completed upon initial application and automatically recertified every two years (see Recommendation Case Study: SFMTA and Clipper Pass below).

By creating a systemwide discount for low-income riders, Metrolink has an opportunity to build onthe successful line-based fare discount programs that increased pre-pandemic ridership on the Antelope Valley and San Bernardino lines, which serve more riders of lower incomes as compared to the whole Metrolink system.

This recommendation is aligned with Metrolink adopted Fare Policy Goals #1 (Recover and Grow Ridership) and Goal #3 (Ensure Equity).

Increase Pass Discount for Senior/Disabled/Medicare Riders to 50%

Support the recommended 50% discount program for low-income riders (above) and adjust the existing Senior/Disabled/Medicare program to offer a 50% discount for passes, instead of only for single trips as currently. Riders in this demographic profile increased by 88% on the Antelope Valley line after the 25% discount fare price was implemented in 2015.

This will support the accessibility of fare structure by making it easy to understand while also making the system more affordable to riders from social equity communities. Based on stakeholder interviews with Metrolink staff, the administrative burden to implement this discount adjustment would be negligible.

This recommendation is aligned with Metrolink adopted Fare Policy Goal #4 (Enhance Customer Experience) and its guiding principle: Ensure fare system, products, purchase, enforcement, and pricing are easy for customers to understand and use.

Implement Fare Capping for Riders with Metrolink App

Implement fare capping to permit riders to pay as they go. A mobile-based app can allow Metrolink to track how much an individual rider has spent on the system in a given month period. Metrolink can then determine whether or not the purchase of an additional fare would push that rider over the cost of a pass. If the rider belongs to a discounted fare group, fare capping should take place based on the discounted rate of the monthly pass. Note that further Metrolink analysis regarding revenue impact is recommended.

This recommendation is aligned with Metrolink adopted Fare Policy Goal #3 (Ensure Equity) and its guiding principle: Offer discounts for frequent usage to ensure Metrolink fares are affordable for essential workers, students, and other low income populations who depend on Metrolink on a regular basis.

Metrolink's Fare Policy Goals and Guiding Principles also directs the use of distance traveled as a means to calculate fare prices (#3 Ensure Equity). This Study strongly recommends that any distance-based fare formula applied to communities within the Metrolink service area include reference to current geographic distribution of sociodemographic communities, using the Equity Atlas (Recommendation #3 above). Residential market and development trends over the last 15-20 years have reversed previous demographic patterns, with outer suburban communities becoming more populated with people of color and people of lower incomes and less educational attainment. This is, in large part, due to housing costs within the central urban core becoming comparatively less affordable than further away suburbs. Yet many high-quality

job centers and employment generators in Southern California remain clustered in the central urban core. The purpose and intended use of the Atlas is to provide Metrolink with data and spatial analysis to assess how policies such as distance-based fare structures might unintentionally burden historically marginalized communities that may need to live further away from the jobs-rich urban core to afford rent or homeownership.

Recommendation Case Studies

In an effort to better understand the implementation process of a means-based discount program, the consultant team interviewed staff from the San Francisco Municipal Transportation Agency (SFMTA) and Denver Regional Transportation District (RTD). These were chosen as a case studies because the consultant team believes elements from the third-party verification methods utilized by SFMTA, Clipper Start program, and RTD could be adapted for Metrolink as the agency seeks to implement affordable, accessible, and equitable changes to its fare structure (Recommendation #4 above).

LIFELINE - SFMTA AND HSA (INTRA-COUNTY)

The SFMTA low-income monthly pass, Lifeline, offers a 50% discounted monthly pass for riders with individual annual incomes at or below 200% of the Federal Poverty Level (FPL). To verify income eligibility for Lifeline applicants, SFMTA combines in-house verification with third-party verification. Applicants may show proof of eligibility by demonstrating eligibility and enrollment in other income-based programs such as Electronic Benefit Transfer (EBT), Medi-Cal, or Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), which are verified by SFMTA staff. Applicants may also demonstrate eligibility via income tax documents, which are verified by the San Francisco Health Services Agency (HSA), which provides assistance connecting residents in the City and County of San Francisco to public benefits, services, and programs. SFMTA maintains a contract with HSA for this verification service because income tax document verification does not fall under the classification of SFMTA staff that processes Lifeline applications. A third option offered to applicants is to self-certify eligibility by providing the last four digits of their social security number (SSN) and date of birth (DOB) to HSA, if they are not able to provide any other additional documents.

The Lifeline application program is intended and designed to reduce as many barriers to enrollment as possible. SFMTA does not double-check applicants' enrollment in other income-based programs, as this would require research into further identifying information of applicants. For example, applicants need only to provide an email screenshot or image of their benefits card (EBT, Medical, etc.). HSA is only able to verify eligibility via SSN and DOB if applicants sign a waiver to release this information to the agency, per state law. Further, SFMTA no longer requires customers to recertify income eligibility because HSA has reported that very few qualifying applicants graduate out of the eligible income level. Currently, SFMTA automatically recertifies Lifeline applicants every two years to reduce barriers for enrollment and also reduce redundant administrative obligations for both agencies.

Prior to the COVID-19 pandemic, SFMTA processed approximately 50,000 applications in-house for Lifeline passes, as well as other low-income programs such as vehicle citation payment plans. SFMTA estimates approximately 20-30% of total eligible Lifeline applicants are not enrolled in other public benefits programs and verify their eligibility through income tax documents or self-certification (SSN and DOB).

CLIPPER PASS - SFMTA AND MTC (INTER-COUNTY)

In October 2020, the Municipal Transportation Commission (MTC), the transportation planning, financing and coordinating agency for the nine-county San Francisco Bay Area, launched the 18-month Clipper Pass pilot program. The Clipper Pass offers single-ride discounts (either 20% or 50%, depending on transit provider) via smart card technology to eligible riders on 21 Bay Area transit systems. SFMTA was one of the original tier of participating transit agencies of the Clipper Pass pilot. Unlike the Lifeline program (above), which verifies income through agencies within the same county, Clipper Pass includes transit providers from nine counties in the MTC jurisdiction. MTC serves as the administrator and verifies eligibility for riders on behalf of all transit agencies participating in the Clipper Pass pilot. MTC also provides subsidies to participating agencies to offset fare revenue shortfall from Clipper Pass discounts.

Similar to Lifeline, Clipper Pass eligibility verification is intended to be low-barrier and riders may simply show enrollment in other public benefits by showing their enrollment cards or providing income tax documents. Further, SFMTA Lifeline passes are also accepted documents to verify income eligibility for Clipper Pass. MTC tracks program metrics, including applications processed and approved, number of riders issued discounts, and number of rides taken with the Clipper Pass on participating transit agencies.

Due in large part to the pilot's launch during the global pandemic, enrollment numbers have been much lower than forecasted (during pre-pandemic time) at approximately 4,000 applicants enrolled since October 2020. While the pilot is currently intended to last 18 months, MTC and participating agencies are considering an extension before the pilot end date of April 2022.

Because of the breadth of the Clipper Pass program, the role of MTC as a third-party verifier for income eligibility serves the various transit agencies. MTC also provides the first point of contact for customer service inquiries, as well as manages marketing and outreach efforts.

DENVER RTD AND HUMAN SERVICES AGENCY (INTER-COUNTY)

Similarly, the consultant team conducted an interview with Denver Regional Transportation District (RTD) to gain further insight into their low-income fare program LiVE, which provides a 40% discount on all full fare rates for riders with an income level at or below 185% FPL. Like Metrolink, RTD provides transit service to multiple counties across their service area.

Unlike SFMTA, RTD does not conduct any income eligibility verification in-house. This decision was due to the agency's preference to avoid access to customers' personal information and also avoid responsibility for storing personal information data. The agency also did not want to create a new staff position to manage income verification. Instead, RTD contracts with the City and County of Denver Human Services Agency (DHS) to process and provide customer service for all LiVE applications. RTD funds staff at DHS to work with all eight counties within the RTD service area. Staff at RTD have found this arrangement to be easier and more efficient, with a majority of costs going to personnel expenditures. DHS has access to the state-run benefits assistance program, Colorado Program Eligibility and Application Kit (PEAK). PEAK connects Colorado residents to public assistance and benefits programs (e.g. SNAP, Medicaid, and ColoradoWorks) and processes LiVE applications that come in through PEAK online services and the DHS offices. DHS also provides options to apply over the phone. RTD has also funded a DHS outreach coordinator who has recently started working with homeless service providers. The application is currently available in English and Spanish and the Transit Equity team at RTD is currently reviewing other translation needs the agency might provide.

Eligibility for the LiVE low-income fare program includes: being between the ages of 20-64 (as RTD offers separate youth and senior fare discounts), residency in the RTD service area, and a household income at or lower than 185% FPL. Applicants can be automatically qualified based on enrollment in other public benefits programs or by producing other income-related documents such as pay stubs and unemployment letters dated within the previous 30 days of the application date. RTD does not require applicants to hold U.S. citizenship or permanent residence status. For applicants who may not have official pay stubs, contracted DHS staff will also call listed employers to verify income eligibility. Because of the 30-day eligibility window, RTD and DHS do not use income tax documents for verification.

Applicants not already enrolled in other benefits programs are also required to provide a clear and current photograph that will then go on their LiVE pass to verify the pass holder is the same person utilizing the pass and its services. This photo requirement is under informal agency review for its efficacy, as it has been identified as a pain point for applicants and can potentially stall approval or verification of eligibility if the photo does not meet the visual standards required (e.g. no covering of face or head, no black and white photos, or appropriate size of subject). Applicants receive eligibility determination on an annual basis. After one year, the LiVE pass expires and riders must apply for a brand new pass, again following the steps outlined above.

As LiVE was launched in July 2019, RTD was not able to collect a full year's data on how the program affected ridership before the COVID-19 pandemic in March 2020. In November 2020, RTD conducted a LiVE participant survey and found that 93% of respondents rode RTD before being approved for the LiVE pass. Overall, however, enrollment is much lower than expected due to the pandemic. Customers have also reported that the online application is a higher barrier to enrollment than RTD anticipated. RTD is currently working to mitigate the online application barrier through the phone application option and an in-person application option that will launch soon. In addition, the agency is conducting a refreshed round of information and application walk-through sessions to government and nonprofit organizations that are willing to assist their clients with the application.

Unlike the Clipper Pass program, RTD does not receive any subsidies to offset any fare revenue shortfall from the LiVE discounts.
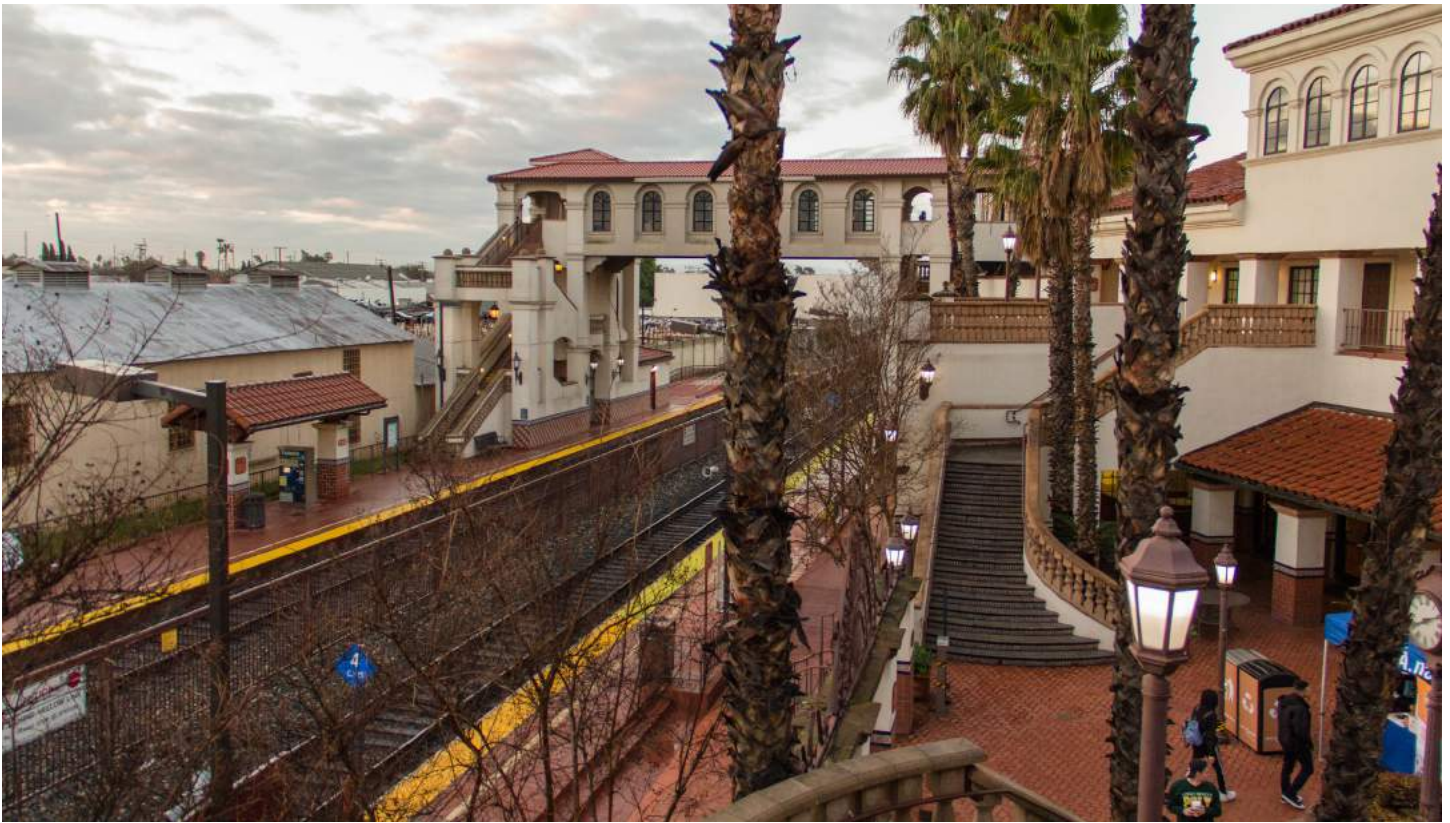
5 PRIORITIZE STATION ACCESS IMPROVEMENTS IN SOCIAL EQUITY COMMUNITIES

Enhancing station access, specifically intermodal access at transport stations, has traditionally been accepted as a way to expand transit touchpoints for the riding public. The federal government, as well as transit agencies, have touted improvements to access as benefits in the areas of environment, public health, and overall to support congestion-mitigation measures. Metrolink also acknowledges the potential of station access in its Strategic Business Plan (SBP), specifically as it relates to expanding

ridership on commuter rail and a way to address first mile and last mile challenges in this tenuous time.[5] With close to half of the current ridership relying on Metrolink as their primary means of transport and yet many without a vehicle, this emerging essential ridership is crucial in its recovery framework. Station access, in the form of improvements that connect the surrounding community to its local station, is an equity concern and addressing it directly tackles accessibility challenges. One study about the San Diego

53

Metropolitan Transit System made the case of utilizing equity in station access planning, which found that changing the mode of access and egress to and from stations can be more effective at improving transit access to jobs than policies that reduce transit wait time or improve service headway.[6]

The ability to easily navigate from home, school, or work to a local station without a car is critical. Community-based stake-holders also addressed station access as a critical factor in riding the Metrolink system (see Research Summary section of this report). Accessibility, as noted in the definition above, includes the tactical improvements on-site and addressing physi-cal as well as societal barriers to the station. Our recommendations on improving station access are below.

For more examples of station access improvement types, see Appendix 7.

Prioritize Metrolink's Emerging Station Access Program in Atlas Defined Social Equity Communities

The Strategic Business Plan (SBP) identifies a list of stations[8] as the highest priority for the five-year term. Metrolink should deploy the Equity Atlas as a way to ensure that at a minimum, 50% of all stations supported with the strategy are located in social equity communities—as defined per recom-mendations 2 & 3. This directly addresses Metrolink's desire to serve the evolving rider-ship while working to expand its ridership.

Given Metrolink's limited formal role in station development and improvements, Metrolink can work to pool funding (state or federal) and set criteria in line with a focus on accessibility

Identify Key Improvements for Stations Beyond the Statistics, by Engaging Communities Surrounding the Station First

Metrolink must partner with Member Agencies to be a catalyst for station access improvements. Metrolink should start a participatory engagement process with surrounding social equity communities beyond public hearings to understand the most desired access improvements (see Recommendation #6).

Ensure that all Improvements Incorporate Disability Access

Any new improvements must be accompa-nied by a user perspective for people with disabilities. New innovations to address the needs of the disability community can make Metrolink a leader in this space and are often treatments that go beyond ADA.

6 DEVELOP NEW STAKEHOLDER ENGAGEMENT APPROACHES

Advancing accessibility and affordability requires nurturing grassroots organizing to expand community power and creating leadership ladders and lattices that will effectively change the conversation on equity and hold government accountable.[7] Traditionally, public agencies approach stakeholder outreach on a project-by-project basis and are procedural in nature. This approach does not address or incorporate key elements of engagement between community members and public agencies: trust, power, and definitions of expertise.

Before forging new community partnerships, agencies must seek to understand that, following many years of disinvestment and neglect, mistrust exists in many marginalized communities. Discriminatory policies have

marginalized low-income communities and communities of color and traditional public participation processes are often artificial and do not include spaces to share stories, lift up community assets and knowledge, or include community members and community-based organizations (CBOs) in shaping the agenda, the process, and the ultimate decisions.[8]

Subsequently, a lack of trust is compounded by disproportionate power dynamics in traditional public meeting formats. Change can be difficult to accept for anyone, but particularly when those experiencing change do not feel consulted, forewarned, or like an integral part of determining the change to take place. Building the power of underrepresented communities must involve multiple

touchpoints, or be operationalized across different "layers," in order to be effective: that of individuals; of relations within and across groups; and of stable institutional structures people use to strategize, coordinate, communicate, and mobilize.[9]

One way to shift dynamics of trust and power is for agencies to shift engagement goals from a project-based model to a partnership-based approach. Agencies can re-define engagement success as fostering long-term partnerships with influential CBOs and institutions, rather than community support of (or lack of opposition to) specific projects. This would better position agencies to bring projects and ideas to community members. At the same time, these community members are positioned as leaders of change in their neighborhoods, leveraging their own expertise and assets to shape projects and initiatives to benefit the intended end-users: themselves.

Recalibrate Agency Engagement Goals to Cultivate Partnerships Rather than Project Approval

Identify influential and long-time CBOs from Atlas-defined social equity communities within the Metrolink region for community partnership development (see Recommendation #3).

Position community members and CBOs to meaningfully refine agency equity goals and strategies by:

- Creating stakeholder councils or committees with meaningful agency influence.

- Providing resources/compensation for CBO staff and following their lead to determine appropriate meeting times, accessible meeting locations and formats,

language access/childcare needs, meeting outreach, and follow-up to community feedback.

- Utilizing outreach performance metrics that prioritize resident voice and power.[12]

Examples of such metrics include: number of agency decisions (policy, budget, program, project, etc.) directly influenced by community feedback (meetings, surveys, letters, etc.); number of community members represented on agency advisory committees and/or commissions; number of contracted partnerships with CBOs and/or community members for activities including, but not limited to, outreach, data collection and analysis, budget analysis, program and policy development, and communications strategies.

Identify a New or Upcoming Project to Initiate a New Partership-Centered Model, such as Changes to Clock-Face Schedule or Fare Policies

Potential upcoming projects to adopt this model may include: the rollout of a clock-face schedule, new fare programs, new station improvement access programs.

Identify a variety of communication methods, including but not limited to text messaging, non-English language media and/or local neighborhood publications.

Defining community expertise as "equal" to the expertise of planners, engineers, traditional consultants, and other public agency staff is critical to facilitating lasting partnerships. Long-standing residents and community institutions know what "works" and what doesn't in their neighborhoods and this knowledge is integral to the success of projects and initiatives. While some agency officials may fear that stronger community groups just means more conflict, research shows that the opposite can be the case.[10] Moreover, these are the organizations that can produce the leadership that can champion measures, mobilize other voters and residents, and stick their necks out for equity.[11]

During the Stakeholder Outreach activities of this Study (see Research Summary section of this report), interviewees expressed interest and willingness to identify partnership opportunities with Metrolink in the future, ranging from compensated focus groups to developing agency policies and programs that serve low-income and marginalized riders.

7 SUPPORT AFFORDABLE HOUSING AND JOB GROWTH BY SETTING CRITERIA FOR TRANSIT ORIENTED DEVELOPMENT (TOD) THAT CENTERS AFFORDABILITY

Many transportation agencies have worked to either support Transit Oriented Development (TOD) through direct involvement in development efforts or a Board-adopted policy around an agency's values and goals. This is difficult for Metrolink to do because it does not currently own or control stations on its routes compared to other commuter or regional railroads who can issue development or air rights nearby. TOD is a highly effective strategy for increasing and sustaining ridership[12] and preserving and building affordable housing can be a critical climate protection strategy.[13] When Metrolink does participate in development near stations, it is as an engineering entity—to ensure that technical and design standards are met.

Metrolink's immense purview in providing multi-county transportation allows the agency to be a regional leader on accessibility and affordability. Proactive

# EQUITY ATLAS DESCRIPTION AND PERFORMANCE MEASURES

ATLAS GUIDE INTRODUCTION

Based on the consultant team's review of best practices and consultation with the Metrolink project managers, it was determined that an "Equity Atlas" (the Atlas) should be developed to help Metrolink assess where acute barriers to accessing and affording service currently exist. The Atlas can be used to proactively analyze Metrolink's service area and prioritize investments in and programs assisting individuals belonging to social equity communities. Metrolink is seeking to determine how best to make modifications to its existing service and fare structures to accommodate current ridership and to expand it as the region recovers from the COVID-19 pandemic. The Atlas is one tool that can help Metrolink to

better acquaint itself with the populations that make up its potential pool of riders, and to address gaps that may exist in serving populations that need more concerted assistance to access and/or afford the regional transportation Metrolink provides.

The Atlas is a Geographic Information System (GIS) software tool that provides census tract-level detail for the five counties (Los Angeles, Orange, Riverside, San Bernardino, and Ventura) that comprise the Metrolink Joint Powers Authority (JPA). Representations of existing routes, stations, and station catchment areas are provided on the Atlas.
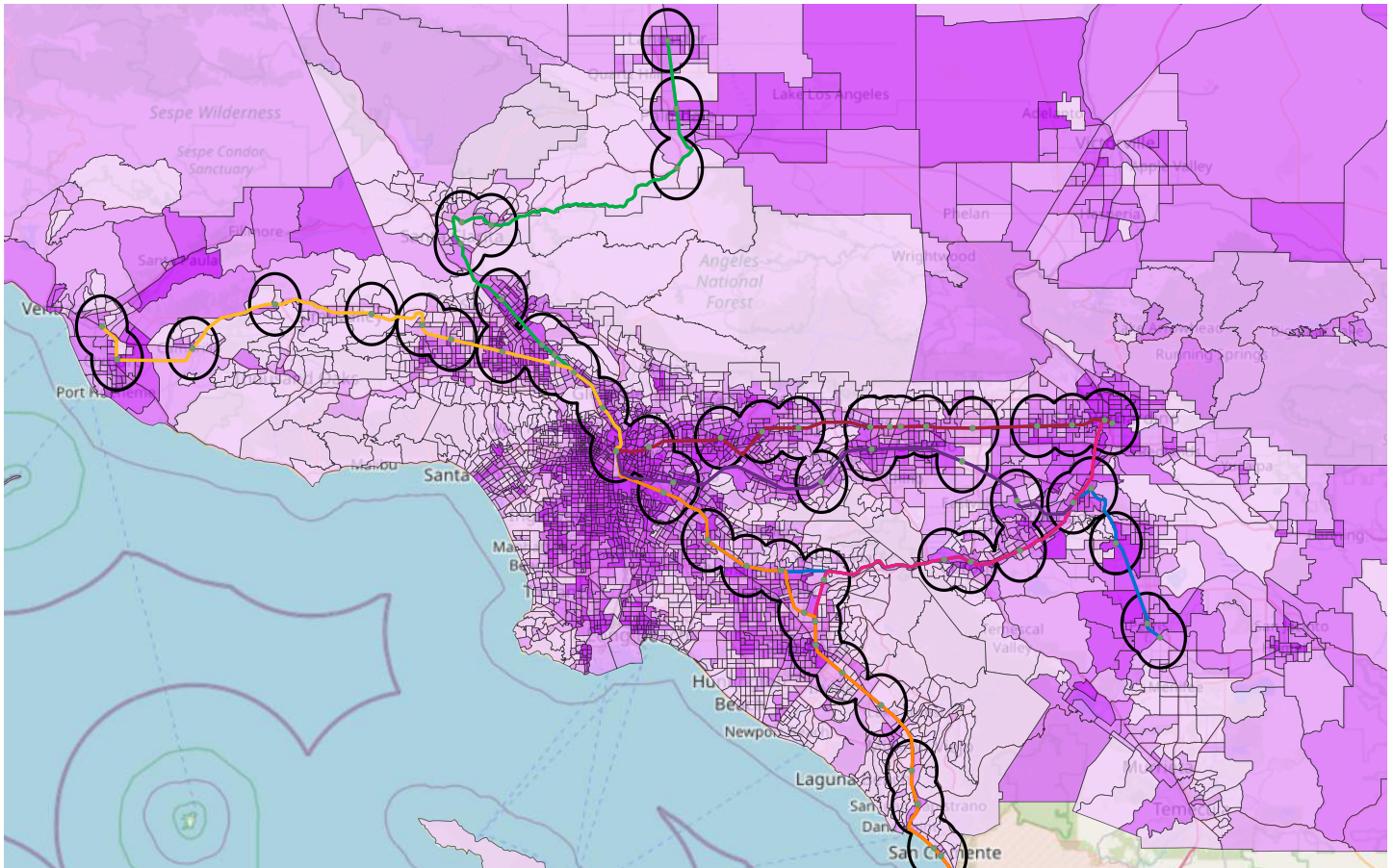
Screenshot of Equity Atlas graphically displaying "composite" scores of sociodemographic characteristics by census tract in the Metrolink service area. Metrolink train lines, stations, and three-mile station radii are also illustrated.

The Atlas contains individual maps showing the prevalence of different community characteristics that can serve as proxies for barriers to accessing or affording Metrolink service. In each of these layers, a "score" between 1 and 5 is assigned to every census tract. A score of 5 indicates that the census tract is among the 20% of tracts in the five-county region that are most impacted by the barriers faced by the selected social equity community. A score of 4 is assigned to the next 20% of census tracts, and so on until the least impacted tracts, which are assigned a score of 1.

The individual layers are used to generate what is called the Atlas's "composite layer." (see image on previous page) The composite layer is intended to create a balanced picture of where the highest priority for attention and investment in equitable service should be concentrated. In order to accomplish this, a composite raw score is generated by adding up the scores for each individual layer. Each census tract is then assigned a final composite score in the same manner as above, with a 5 indicating the tract has a raw score among the highest scoring 20% of tracts and a 1 being assigned to the lowest scoring 20% of tracts.

In addition, the Atlas also provides unscored layers to allow users to observe the distribution of disaggregated race and ethnicity data within the five-county area.

About The Equity Atlas Guide

This document is intended to serve as a general guide to the Equity Atlas developed by the consultant team for use by Metrolink. Atlas users should be able to find information regarding the state of the Atlas and the metrics it included as of Spring 2021. Users will also be able to find information about keeping the Atlas current.

This Atlas, like Equity Atlases designed and implemented by other government agencies, provides a guidepost for assessing which communities within the Metrolink service area exhibit a higher prevalence of vulnerable and/or marginalized communities. The Atlas can also help Metrolink determine where existing and historical need is greatest, so that the agency can steer funding, policy development, and/or project prioritization to improve Accessibility and Affordability conditions for those living in high-need areas.

USING THE ATLAS

About the Layers

The Atlas is made up of 13 scored individual layers and one scored composite layer. Additionally, there are sublayers provided to allow for analysis of race and ethnicity categories as provided by the U.S. Census. Each layer provides graphical analysis of the Metrolink five-county area on the census tract level. The layers represent individual characteristics that affect equity, accessibility and affordability outcomes. The Atlas can support Metrolink's analysis of how various programs, projects, policies, and other decisions might impact geographic communities of higher vulnerability and/or need. The individual layers represent the following sociodemographic characteristics: race/ethnicity, household income, English language proficiency, educational attainment, youth/children, older adults, vehicle access, rent burden, pollution burden, homeownership rates, 200% of Federal Poverty Level, people living with disabilities, and historic redlining. The layers are further detailed in Appendix 8 of this guide.

Guiding Questions

The Atlas illustrates a geographic representation of vulnerable and marginalized populations across the five counties of Metrolink's service area. The objective is to increase understanding of geographic

communities as well as the sociodemographic communities disproportionately represented in these geographic areas. The Atlas is intended to be used as a spatial reference to the following recommended questions to assess equity, accessibility and affordability in Metrolink decisions, plans, programs, and policies. There are two phases of questions: one that will be illustrated in the Atlas and a second that will help guide subsequent decisions and discussions after reviewing Atlas data.

Phase I: Review the Atlas

Which geographic communities are most likely to experience benefits and/or burdens from the proposed Metrolink action and/or decision?

Based on the sociodemographic characteristics illustrated by the Atlas, does the proposed action and/or decision have the potential to disproportionately impact accessibility or affordability of Metrolink services for vulnerable and marginalized populations?

Which sociodemographic communities will be most impacted?

Phase II: Use the Atlas to Inform Decision-Making

Does the proposed action and/or decision impact any Metrolink funding or departmental budgets that might benefit or harm vulnerable and marginalized populations?

What steps or analysis can be conducted to mitigate any harm or negative impact to vulnerable and marginalized populations?

Are there opportunities to engage and follow the leadership and desires of members and/or organizations most impacted by the proposed action and/or decision?

Once the proposed action and/or decision is approved, how will Metrolink monitor its progress and impact on vulnerable and marginalized populations?

Will/can Metrolink follow up with and/or report back to members of and/or organizations representing these vulnerable populations who they previously engaged with earlier in the process?

Performance Measures

The Atlas is intended to help Metrolink focus on and prioritize investments within social equity communities. To gauge the utilization and performance of the Atlas on an ongoing basis, the consultant team recommends that Metrolink employ the following measures and potential metrics.

Category	Performance Measure	Potential Metric(s)
Accessibility	Metrolink accessibility for social equity communities	• Proportion or number of riders representing social equity communities • In-person, surveys conducted in partnership with grassroots organizations or institutions in relevant languages • Average headways at stations serving social equity communities • Proportion of riders who connect to Metrolink by non-private vehicle modes at stations in social equity communities
Accessibility	Elevating and centering perspectives of social equity communities	• Number of ongoing partnerships with community organizations serving social equity communities
Affordability	Metrolink affordability for lower income or fixed-income riders	• Proportion or number of riders utilizing income-based or age-based discount programs • Proportion or number of riders from lower income brackets

CONCLUSION

As Southern California emerges from the critically urgent COVID-19 pandemic, this report seeks to hold on to important lessons learned from 2020, particularly a continuing commitment to implement equity into public agency services and decisions. The Accessibility and Affordability Study is intended to be an initial step towards implementing equitable goals, tools, and practices at Metrolink.

As discussed in the Research Summary section, best practices for implementing equity at public agencies are relatively new ventures across the transportation sector. With the "Triple Bottom Line" of economy, environment and equity, Metrolink is well-poised to be a transportation equity leader among commuter rail agencies, implementing short- and long-term interventions that are grounded in an equitable framework.

The agency is also positioned to expand on its stakeholder engagement practices and partnerships, particularly in its vast and diverse service area that covers many communities across Southern California. The recommended definition of equity (Recommendation #1) and utilization of the Equity Atlas (Recommendation #2) are intended to serve as a strong foundation for Metrolink to pursue future strategies to implement and operationalize equity into all aspects of the agency. The Equity Atlas provides a geographic and sociodemographic analysis of the Metrolink service area, but just as critically, the utilization of this analysis must be centered on the benefits and burdens of the region's social equity communities. Further, reassessing the Metrolink fare structure to identify short-term enhancements to accessibility and affordability to the Metrolink system

(Recommendation #4). The entire list of Recommendations are also encouraged to be revisited regularly to update data, values, constraints, and opportunities.

A commitment to equity must be consistent, nimble, and ongoing. Agency policies or decisions affecting service, ridership, or investments cannot be "neutral" without potentially exacerbating broader existing inequities. Similarly, the implementation of equity within public agencies is a continuous process. Laws and neighborhoods change, social conditions shift, and technology advancements introduce new concepts that cannot always be forecasted. Yet, the need to center decision-making, policies, and budgets on the ideals of equity, accessibility and affordability should remain consistent. Now more than ever, the public is demanding accountability, particularly

from large institutions such as corporations and government. There must be an urgency to center marginalized people's needs for just and fair administration, distribution and access to the benefits that transportation can provide and freedom from the burdens lack of or unjust administration, distribution, and access to transportation can cause. Public agencies must work to provide equitable access to resources and opportunities, free from barriers that discriminate against one group more than another, including the ability to safely and inclusively move from one place to another. Metrolink is poised to lead the industry in this transformative work as it responds to COVID-19 and ensures that equity is the guiding force driving its work and service for years to come.

ENDNOTES

1   Throughout this report, the term 'social equity communities,' will be used as a collective reference to U.S. populations and communities who have historically been marginalized and negatively impacted by inequitable policies. Today these same communities face resource and health disparities and disadvantages because of past and continuing systemic racial discrimination and economic exclusion. These communities include non-white populations, low-income households and people living in poverty, unhoused residents, undocumented immigrants, linguistically isolated communities, and people living with disabilities.

2   Draft Metrolink Business Recovery Framework, May 2020

3   Antelope Valley Line Fare Reduction Program Update, September 2019.

4   Antelope Valley Line Fare Reduction Program Evaluation, March 2018.

5   Metrolink Strategic Business Plan, 6

6   Boarnet: Boarnet, Marlon G., et al. (2017). "First/last mile transit access as an equity planning issue" Transportation Research Part A: Policy and Practice. 103. 296-310.

https://daneshyari.com/article/preview/4928923.pdf

7, 11   Carter: Carter, Vanessa, et al. (2018) "Measures Matter: Ensuring Equitable Implementation of Los Angeles County Measures M&A" University of Southern California Program for Environmental and Regional Equity.

https://resourceslegacyfund.org/publications/measures-matter-ensuring-equitable-implementation-of-los-angeles-county-measures-m-a/

8   Bergstrom: Bergstrom, Danielle et al. (2014). "The Sustainable Communities Initiative: The Community Engagement Guide to Sustainable Communities" Policy Link & Kirwan Institute.

https://www.policylink.org/resources-tools/community-engagement-guide-for-sustainable-communities

9   Clark: Clark, Joshua, ed. (2020) Civic Engagement for Empowerment and Belonging. Othering & Belonging Institute: University of California, Berkeley, CA.

https://belonging.berkeley.edu/civic-engagement-empowerment-and-belonging

10   Freudenberg: Freudenberg, Nicholas, et al. (2011). "Strengthening Community Capacity to Participate in Making Decisions to Reduce Disproportionate Environmental Exposures," American Journal of Public Health 101, no. S1: S123-30.

https://pubmed.ncbi.nlm.nih.gov/22021323/

12   Transit Center: Transit Center. (2018) "Inclusive Transit: Advancing Equity Through Improved Access & Opportunity."

https://transitcenter.org/wp-content/uploads/2018/07/Inclusive-1-1.pdf

13   TransForm: TransForm and the California Housing Partnership Corporation. (2014). "Why Creating and Preserving Affordable Homes Near Transit is a Highly Effective Climate Protection Strategy"

https://www.transformca.org/transform-report/why-creating-and-preserving-affordable-homes-near-transit-highly-effective-climate

14   U.S. Census Bureau, 2019 ACS 5-Year; CA Office of Environmental Health Hazard Assessment, CalEnviroScreen 3.0; Mapping Inequality; University of Richmond [https://dsl.richmond.edu/panorama/redlining/#loc=5/39.1/-94.58]

15   Racial Equity: Baseline Conditions Report (Southern California Association of Governments, March 2021)

APPENDICES

BEST PRACTICES REPORT EXECUTIVE SUMMARY

Introduction

Starting in March 2020, Southern California communities have been forced to rapidly adjust to life during the deadly COVID-19 pandemic. The pandemic has brought unprecedented changes to the routines of individuals and broader social and economic impacts. Similar to other transit agencies across the country, Metrolink experienced a sudden and unprecedented ridership decrease of approximately 90%. Further, the ridership demographics among those remaining after stay-at-home orders were issued in California skewed towards lower incomes and higher proportions of essential and healthcare workers. While some workers have been able to continue working remotely, many others have either lost work due to the pandemic or been required to risk their health at essential in-person workplaces. Over 70% of riders remaining on Metrolink reported being an essential worker in an April 2020 customer survey. These ridership and demographic shifts have been one of many examples of the pandemic's effect on the economy, which has exacerbated already worsening income inequality. Black, Indigenous, Latinx, and Pacific Islander Americans are disproportionately likely to be hospitalized and die from COVID-19.

At the same time, uprisings against institutional racism have taken place across Southern California in the pursuit of justice for communities that have been victimized by the government. These protests have been spurred by long-standing injustices and the continued loss of Black lives to police violence.

In short, this year has highlighted and contributed to existing inequities across Southern California. As part of Metrolink's Recovery Plan Framework, the "Triple Bottom Line" emerged as one of five main pillars, specifically focusing on three key components: economy, environment, and equity.[1] Given the pandemic and its impacts, Metrolink understood the need to examine its service to align with significant changes in ridership and demand. This requires critical analysis of assumptions about who uses the agency's services and what role it can play in serving social equity communities[2].

As part of this work, Metrolink asked the consultant team to conduct a scan of best practices in preparation for development of a tool to support decision-making for Metrolink for a wide range of policy and business categories, specifically accessibility and affordability for

social equity communities in Metrolink's service area. This report reviews seven case studies and associated best practices in the development of analytical tools that seek to achieve equitable outcomes.

This report reviews the work that seven agencies have already begun around equity, the development of tools related to affordability and accessibility, and highlights emerging best practices. This report will summarize these practices and their importance for Metrolink's success to better serve social equity communities and remove barriers to equity. The report will first cover methodology; second, an inventory of case studies reviewed; and third, findings and best practices listed in the order most relevant to Metrolink.

Accessibility, Affordability, and Equity

Accessibility and affordability are key elements of this analysis. For transportation agencies, these two concepts hold a strong nexus to an agency mission focused on mobility. As outlined below, accessibility and affordability are also catalysts to a necessary and expansive discussion on equity.

Accessibility is defined as the access to movement, including ease of connection to transit/mobility and necessary elements of livelihood: jobs and economic opportunity, education, as well as housing and shelter.

Affordability can be understood as a subset of accessibility. If transit is not affordable that is a major barrier to an individual's ability to access that transit. Affordability is defined as the ability to use the service without undue burden on other key necessities. It extends beyond the pure pricing of transit service and includes housing, education, health expenses. In addition, affordability relates to connectivity to other transit and social service providers.

When analyzing the accessibility and affordability of a transit system, the first question to ask is: accessible and affordable for whom?

If the answer is different for different communities, the analysis must include an equity framework. Equity is different from equality. Equality assumes all communities, or populations possess the same resources, opportunities, and access; therefore any additional resources or services can be distributed "equally." Equity acknowledges that communities experience access and opportunity disparately. Addressing these disparities requires the just—not equal—distribution of services within a region, accounting for barriers to access that have historically skewed advantages to more empowered groups.

Accessibility and affordability are critical strategies to addressing COVID-19 pandemic impacts. Developing these strategies must be accompanied with a full equity framework or risk perpetuating new and existing inequities. No policy or decision affecting service, ridership, or investments is neutral because underlying systems and social conditions that impact these policies and decisions are not neutral themselves. This report approaches an analysis

to accessibility and affordability through an equity framework with core considerations that include: historical analysis and consideration, existing social disparities (including race), and a proactive, "not neutral" approach to addressing inequity.

Methodology

In conducting this research, the consultant team reviewed the work of government agencies on improving equity outcomes. In addition, the team facilitated structured conversations with practitioners from several agencies. A review of existing literature from other agencies uncovered a wealth of information from local and regional governments detailing best practices and challenges to operationalizing equity. See Appendix 2 of this report for a list of practitioners interviews conducted.

Of the approximately 30 U.S. agencies providing commuter rail services according to the National Transit Database, very few had completed an equity study or analysis similar to that currently being undertaken by Metrolink. In discussions with peer agencies, many had begun but not yet finished work in this area. A select number of transit providers are detailed in highlighted case studies.

In order to assess best practices, interviews were conducted with individuals who could share expertise about the challenges they faced and the successes they experienced as their agencies defined and sought to implement equitable policies. A review of reports, documents, plans, and tools produced by agencies in the process of their respective equity analyses was also conducted. For the purposes of this report, the goal was to find applicable lessons relevant to Metrolink's own study to improve the accessibility and affordability of services that it provides.

Limitations and Constraints

The scan conducted for this report only included a portion of the materials available for review on this subject. In order to ensure that the materials reviewed were representative of the best practices available, citations and references were sought by professionals who had experience developing their own equity frameworks and tools.

Outside of the U.S., Canada, and Europe, there were no studies identified in which public agencies or transportation providers explicitly employed a social equity framework to analyze and reposition their role in delivering services. It is possible that governments not included here have conducted such studies.

The goal of this report is not to provide an exhaustive or static list of best practices, but rather to provide a foundation from which Metrolink can begin development of its own equity framework with the understanding that best practices related to expanding equity are still emergent. It is clear that for many transportation agencies, the equity journey has just begun.

Case Studies and Best Practice Findings

In this report, practices have been identified based on the experiences of peer agencies that have conducted relevant work in the operationalization of equity policies and processes. The full listing of highlighted Case Studies are found in the body of the report.

Of approximately 50 agencies reviewed, seven Case Studies are highlighted in this report from which Metrolink can derive lessons and best practices. Best practices in this report are further categorized as short-term and long-term strategies. The intention is to provide Metrolink with a structural overview of how agencies start a path to operationalize equity, a critical framework to sustaining an accessible and affordable transportation system.

Because equity work is continuous and iterative, the work in this report is treated as part of an ongoing cycle of analysis and implementation. Although some best practices are likely beyond the scope of Metrolink's current equity work, especially as they relate to the internal institutional practices, they have been included here as an indication of how to proceed in subsequent cycles.

Conclusion

The research and interviews reflected here were compiled in order to help establish best practices that Metrolink can follow in order to successfully and equitably analyze the services that it provides to local communities in Southern California. While this research focused on implementing equity within public agencies rather than on direct responses to the COVID-19 pandemic, Metrolink is at a critical juncture for understanding the widespread inequities that have been laid bare by the pandemic. This understanding will be key to analyzing ways to improve the accessibility and affordability of the Metrolink system. Within the immediate context of the global crises that have resulted from the pandemic, Metrolink has the responsibility to institute agency countermeasures that will do more than steer the region toward a return to an inequitable status quo.

This report is only the first step on Metrolink's path to delivering equity for all Southern Californians. As a transportation agency, Metrolink has the ability to have an outsized impact on the ability of its riders to access opportunities, services, and a better life. With a redefinition of the agency's purpose to explicitly center the operationalization of equity and the service of social equity communities, Metrolink can begin to deliver on its enormous potential as a transportation industry leader.

STAKEHOLDER OUTREACH: ORGANIZATIONS AND AGENCIES

Children's Bureau

Sylvia Scott

- A children and family services nonprofit organization with 16 service locations across Southern California, including Lancaster, Palmdale, and other locations across Los Angeles and Orange Counties.

Coalition for Humane Immigrant Rights (CHIRLA)

Elizabeth Alcantar, City of Cudahy Vice Mayor

- An advocacy nonprofit organization for immigrant rights, organizing, educating and defending immigrants and refugees.

San Francisco Municipal Transportation Agency (SFMTA)

Emmett Nelson

- The San Francisco Municipal Transportation Agency (SFMTA) is a department of the City and County of San Francisco responsible for the management of all ground transportation in the city.

Denver Regional Transportation District (RTD)

Monika Treipl-Harnke

- The Denver Regional Transportation District (RTD) provides public transportation in eight counties including all of Boulder, Broomfield, Denver and Jefferson counties, parts of Adams, Arapahoe and Douglas Counties, and a small portion of Weld County.

Metrolink

- Arun Chakladar
- Henning Eichler
- Mary Riemer
- Rory Vaughn
- Andy Ly
- Monica Bouldin
- Rachel Chaires
- Sylvia Novoa
- Jeffrey Dunn
- Rod Bailey
- Sergio Marquez
- Alfredo Fernandez

PROPOSED DEMOGRAPHIC INDICATORS FOR ATLAS AND SOCIAL EQUITY COMMUNITY DEFINITION

Proposed demographic indicators:

- Highest weighted indicators are strongly associated with social and geographic disparities

  + **Race/ethnicity**: Contemporary economic, educational, and health disparities exist along racial lines and are results of decades of racial exclusion, discrimination, and selective application of laws and services. Therefore, any definition, analysis, and subsequent efforts to achieve equitable outcomes must consider race/ethnicity.

  + **Household income:** Historic disinvestment and intentional geographic concentrations of poverty have created highly segregated socioeconomic communities with vast resource disparities. Lower-income individuals are more likely to rely on public transportation and are the core riders of any transit system.

  + **Vehicle access:** Similarly, households with no access to vehicles are reliant on public transportation as a primary mode of travel.

  + **Historic exclusion:** In alignment with the above-proposed equity definition, identifying geographic communities with a history of redlining, racial covenants, and/or other exclusionary planning practices provides Metrolink with context to understand existing barriers to access.

- Secondary weighted indicators are moderately associated with social and geographic disparities:

  + Education: Potential indicator for existing resources and/or access to employment or economic advancement.

+ English language proficiency/language isolation: Addresses accessibility barriers and generally geographically sensitive.

+ Ability: Critical indicator for accessibility measurement that may be less geographically sensitive but could be considered in combination with the highest weighted indicators.

+ Advanced age (65 and over): Potential indicator for accessibility and affordability measurement that may be less geographically sensitive but could be considered in combination with the highest weighted indicators.

• Indicators for consideration or additional analysis are correlated with social and geographic disparities but data may be difficult to obtain or include rapidly shifting demographics:

+ Immigration status: May impact perceptions of safety and security utilizing public transportation and/or access to employment or economic advancement.

+ Unemployment rate: Potential indicator for existing resources, to employment or economic advancement, and/or affordability.

+ Essential workers: Critical indicator for COVID-19 recovery in the short- to medium-term.

SELECTED PEER AGENCY EXAMPLE FOR PROPOSED RECOMMENDATIONS

Recommendation 1: Adopt an Agency Definition of Equity

Selected Public Agency Equity Implementation Examples:

- Seattle became one of the first cities to apply a racial equity framework to government work and in 2014 the Race and Social Justice Initiative (RSJI) completed a three-year plan that broadened the scope of the Initiative beyond Seattle City government.

  + Since then the initiative has birthed a citywide interdepartmental RSJI cohort, arts-based racial equity program, and a 2019-2021 strategy that seeks to implement racial equity trainings and work plans across all Seattle city departments

- In 2016 the City of Oakland launched the Department of Race and Equity and released its first citywide equity indicators report in 2018.

  + The Oakland Department of Transportation ("OakDOT") was founded in 2017 and formed Racial Equity Team that developed a charter being used to operationalize equity, measure progress, and list specific responsibilities for management and staff.

- In 2018 Montgomery County (Maryland) produced a Racial Equity in Government Decision-making report outlining best practices and extensive recommendations for their local government.

  + In Fall 2019 Montgomery County Council unaimously passed Racial Equity and Social Justice Act, 27-19, which included directions to establish a racial equity and social justice program, establish an Office of Racial Equity and Social Justice in the Executive Branch, and establish a Racial Equity and Social Justice Advisory Committee.

  + The policy was informed by a robust community engagement process, including well-attended community conversations under the guidance of a Racial Equity and Social Justice Community Engagement toolkit, created by the County in Spring 2019.

+ A 15-member Racial Equity and Social Justice Advisory Committee was formed in Summer 2020.

Recommendation 2: Define Social Equity Communities for Metrolink

Geographic-based equity community definition examples:

• California's CalEnviroScreen prioritization criteria ranks census tracts statewide by their pollution burden and socioeconomic vulnerability. CES does not factor race/ethnicity in its ranking.

• The Public Health Alliance of Southern California developed the California Healthy Places Index to identify and provide as core to geographies across the state based on community conditions that affect health outcomes: Economic; Education; Housing; Health Care Access; Neighborhood; Clean Environment; Transportation; and Social factors. This assessment does not analyze race/ethnicity.

• The University of Southern California (USC) Program for Environmental and Regional Equity (PERE) developed a prioritization criteria tool Environmental Justice Screening Method that assesses impacts to California communities across four categories: hazard proximity and land use, air pollution exposure and estimated health risk, social and health vulnerability, and climate change vulnerability.

• In 2019 Los Angeles Metropolitan Transportation Authority ("Metro") developed an analysis of the county that weighted race, income, and household vehicle access to identify Equity-Focused Communities for prioritization.

• Metropolitan Transportation Commission's Communities of Concern framework prioritizes census tracts in the Bay Area by weighted "Disadvantage Factors," including race, income, English language proficiency, vehicle access, older adults, people living with disabilities, single parent-headed households, and severely rent-burdened households.

• The Los Angeles County Parks Needs Assessment inventoried 901,647 acres and 3,023 facilities to rank 188 study areas by parks/open space access needs in advance of Measure A, a countywide parcel tax that would generate revenue for parks funding.

Recommendation 3: Create an Accessibility & Affordability Atlas for Decision-Making Purposes

See Accessibility & Affordability Best Practices Report

Recommendation 4: Changes in Fare Program to Increase Affordability

Fare Program Comparison Chart Forthcoming in Final Report

Recommendation 5: Prioritize Station Access Improvements in Social Equity Communities

Selected Station Access Program Examples:

- **Bay Area's BART** has a comprehensive Station Access Policy adopted in 2016 with clear goals, along with a design hierarchy for station access improvements divided by station type. Performance Metrics and tangible goals are established for this program with targets set for 2025.

- **LA Metro** has developed an innovative Blue Line first/last mile plan for all 22 stations on the Metro Blue Line in 2018, which was developed in partnership with a coalition of community-based organizations and set a model for participatory selection of improvement projects for each unique station. Walk audits were a key element of identifying improvements.

- **Sound Transit** established a $100 million Station Access Fund for improvements such as safe sidewalks, protected bike lanes, shared-use paths, improved bus-rail integration and new pick-up and drop-off areas. Municipalities, Counties and Transit Agencies in specific areas may apply for funding with Sound TRansit goals and criteria at the forefront.

Recommendation 6: Develop New Stakeholder Engagement Approaches

Community partnership model examples:

- The Los Angeles Department of Transportation Vision Zero Dignity-Infused Community Engagement (DICE) approach is a cross-sector effort to center community members in the Vision Zero planning process from the beginning; weaving all perspectives and lived experiences into the technical planning process.

  + Contract timeline: 24 months; contract budget: $2.8 million; external partners: 15 CBOs, five technical/service contractors working on 12 Vision Zero street safety projects

- The National Association of City Transportation Officials (NACTO) recently administered a pandemic rapid response grant to fund public agency and CBO partnerships to implement built environment responses to COVID-19 impacts.

  + Contract timeline: two months; contractor/grantee budget: $286,000; 10 city agencies with 15-20 community partners working on 10 projects/programs.

Recommendation 7: Support Affordable Housing and Job Growth by Setting Criteria for Transit Oriented Development (TOD) that Centers Affordability

Agencies with Explicit Affordable Housing and Job Creation Goals

- In joint real-estate development programs, LA Metro has set a standard that 35% of total housing must be affordable. Bay Area's BART requires a minimum of 20% affordable housing in station TODs and has recently increased it in 2018 to 25%[3]

- The Metropolitan Transportation Commission (MTC) in the Bay Area commissioned UC Berkeley to develop the "Regional Early Warning System for Displacement"

METROLINK FARE POLICY GOALS AND GUIDING PRINCIPLES (OCTOBER 2020)

Fare Policy Guiding Principles

Selected Public Agency Equity Implementation Examples:

- Seattle became one of the first cities to apply a racial equity framework to government work and in 2014 the Race and Social Justice Initiative (RSJI) completed a three-year plan that broadened the scope of the Initiative beyond Seattle City government.

  + Since then the initiative has birthed a citywide interdepartmental RSJI cohort, arts-based racial equity program, and a 2019-2021 strategy that seeks to implement racial equity trainings and work plans across all Seattle city departments

- In 2016 the City of Oakland launched the Department of Race and Equity and released its first citywide equity indicators report in 2018.

  + The Oakland Department of Transportation ("OakDOT") was founded in 2017 and formed Racial Equity Team that developed a charter being used to operationalize equity, measure progress, and list specific responsibilities for management and staff.

- In 2018 Montgomery County (Maryland) produced a Racial Equity in Government Decision-making report outlining best practices and extensive recommendations for their local government.

  + In Fall 2019 Montgomery County Council unanimously passed Racial Equity and Social Justice Act, 27-19, which included directions to establish a racial equity and social justice program, establish an Office of Racial Equity and Social Justice in the Executive Branch, and establish a Racial Equity and Social Justice Advisory Committee.

  + The policy was informed by a robust community engagement process, including well-attended community conversations under the guidance of a Racial Equity and Social Justice Community Engagement toolkit, created by the County in Spring 2019.

  + A 15-member Racial Equity and Social Justice Advisory Committee was formed in Summer 2020.

Geographic-based equity community definition examples:
- California's CalEnviroScreen prioritization criteria ranks census tracts statewide by their pollution burden and socioeconomic vulnerability. CES does not factor race/ethnicity in its ranking.

Fare Policy Guiding Principles

The following guiding principles set the stage for Metrolink's Fare Policy, identifying the critical and complementary roles that ridership, financial stewardship, equity and an improved customer experience play in overarching fare strategy, policy decisions, fare products and, ultimately, Metrolink's promise to the customer.

Metrolink is committed to following Federal Transit Administration Title VI requirements and guidelines that ensure "the impacts of service and fare changes are not discriminatory and are distributed equitably to minority and low-income populations."

1. Recover and grow ridership

Ridership is the primary measure for Metrolink's essential contribution to the region's mobility and the Agency's ridership recovery and growth strategy. Our fare policies should:

- Encourage sustainable ridership growth through customer-focused fare policies. These policies are cognizant of the preferences of customers of different ages, abilities and socioeconomic backgrounds.

- Balance ridership growth with other goals such as financial sustainability by incorporating benefits such as increased regional mobility, reduced freeway congestion or greenhouse gas emissions into decision-making.

2. Enable financial sustainability

Financial sustainability is a precondition for providing and expanding our essential service to the community. Our fare policies should:

- Optimize fares to meet revenue targets and improve farebox recovery while acknowledging that needs for immediate revenue growth should be balanced with the need to recover, retain, and grow ridership that will lead to future revenue growth.

- Be mindful of subsidy requirements and funding limitations by the member agencies.

- Ensure fares are consistent and cost-effective to administer and enforce.

- Enable innovation and testing of new fare pilots so the Agency can nimbly respond to changing market conditions.

Include fare discounts or premiums as a means to encourage behavior in support of the Agency's policy goals.

3. Ensure equity

Metrolink is cognizant of the diverse needs of the region's population, which includes individuals with varying economic, social, and geographic backgrounds. Our fare policy should:

- Use distance traveled as a means to calculate fare prices.

- Offer discounts for frequent usage to ensure Metrolink fares are affordable for essential workers, students, and other low-income populations who depend on Metrolink on a regular basis.

- Apply discounts based on ticket type and rider type consistently across all lines.

- Adhere to Federal Transit Administration Title VI requirements and guidelines for all fare policy changes.

4. Enhance customer experience

Customer experience is a key consideration for all decisions governing fare policy and fare technology. Our fare policy should:

- Ensure fare system, products, purchase, enforcement, and pricing are easy for customers to understand and use.

- Ensure fare products are designed with the needs of different customers in mind, such as commuters and leisure riders, students, visitors, and others.

- Improve regional mobility through seamless transfers and regional fare integration.

RIDERSHIP PERFORMANCE METRIC

Metric	Description	Objective	Interval	Data Source
Boardings	Unlinked passenger trips by fare type	Stable or growing	Monthly Quarterly Annually	Ticket sales

FINANCIAL PERFORMANCE METRICS

Metric	Description	Objective	Interval	Data Source
Farebox Revenue	Revenue collected from passenger fares	Meet or exceed budget	Monthly Quarterly Annually	Finance

EQUITY PERFORMANCE METRICS

Metric	Description	Objective	Interval	Data Source
Affordability	Fare changes benchmarked against CPI index	Fare changes do not exceed rate of inflation	Annually	Bureau of Labor Statistics

CUSTOMER EXPERIENCE PERFORMANCE METRICS

Metric	Description	Objective	Interval	Data Source
Voice of the Customer (VOC)	Customer feedback	Stable or improving	Monthly Quarterly Annually	Customer relations, market research
Fare Product Utilization	Fare product sales	Fare products responsive to customer demand	Quarterly Annually	Market research

GLOBAL FARE STRATEGIES EXAMPLES

Discount Programs

It is common for agencies to have a combination of discount programs. Increasing the number of fare products creates an administrative burden for monitoring and supporting discount programs that are offered. It also creates a potentially more confusing system for riders, in which some riders may be eligible for discounts but not receive them because they are unaware that they qualify or the barriers to entry are too daunting.

Fare Capping

More agencies are implementing or studying the use of fare capping or "pay-as-you-go" discounting. The most prominent world example of fare capping is in London. Fare capping works by allowing riders to pay for individual trips rather than requiring them to plan out whether or not they will take enough trips to merit the purchase of a pass. When a passenger has paid for single fares equivalent to the cost of a pass, the passenger will not be charged for additional travel within the designated zones.

Fare capping improves affordability for low-income riders as it helps to defray the upfront cost of a pass. For lower-income riders, the cost barrier to purchasing a monthly pass is high as it requires a large sum upfront. Although these riders may ride a service frequently, they often end up paying the base fare. In a study of its ridership, Caltrain found that the result was that the agency was likely earning more revenue from lower-income riders than higher-income passengers.

Fare Integration

Another strategy used to stimulate the accessibility and affordability of transit is to integrate fare structures and prices regionally. This approach is common in major European cities and is gaining traction in certain other locations as well. Fare integration utilizes a single shared definition of geographic zones across all transit agencies in an area and allows passengers to make the trip using the mode that makes most sense for them at a single price. This can be accomplished either across the entire service area or specifically in an inner zone. In Paris for example, passengers can travel by bus, train, or regional rail within the central city for a single price regardless of mode.

In the Metrolink service area, an approach to this might involve coordinating Metrolink fares with local service providers to ensure that there was a single fare price and fare media accepted within Los Angeles County or a portion thereof. Fare integration would require additional study and buy-in from neighboring agencies. There is an opportunity for Metrolink to act as a first-mover for conceptual support for fare integration.

Public Transit Association

In the German-speaking world, there is an additional concept known as a "Verkehrsverbund," or public transit association, that acts as a representative, overseeing body for regional transit. The association makes sure that there is a uniform regional branding, route numbering, and fare structure within the region. Like fare integration, this would require study and buy-in beyond Metrolink. However, there is an opportunity for Metrolink to voice support for such an idea in a regional setting.

EXAMPLES OF STATION ACCESS IMPROVEMENTS TYPES

Category	Improvement Type	Accessibility Touch Point
On-Site/In-Station Improvements	Lighting Improvements	LA Metro's Blue Line participatory engagement efforts highlighted perceived security issues as a concern and this improvement was a popular choice. Also, lighting can be focused specifically for those walking and on bikes.
	Wayfinding/Signage	ADA or multilingual focused wayfinding. Ex: use of QR codes connected with smart phones for visually impaired folks from orgs like NaviLens.
	Station Furniture	Updated benches and other amenities.
	Elevator Availability Customer Information	For people with disabilities, caregivers, people accompanying young children, visibility into elevator access is critical.
	Landscaping/Shade	Landscaping, trees, and installation of shade structures to offset harsh outdoor conditions including sun.
Connectivity Improvements	Transit Connection Improvements	Instead of focusing on parking capacity, focus on intermodal improvements that connect to local transit and bus connections. This can also include fare integration and schedule coordination.
	Shuttle Service, Service Partnerships, First/Last Mile Rideshare	While this is seen as a new innovative tool (specifically leveraging rideshare), public private partnerships must account for affordability. Subsidized or discounted access could be one approach, and the Agency must ensure the service does not cannibalize transit trips.
	Bike Facilities	Making new mode connections is an easy way for communities to tap into the rail network.
	Pedestrian Access	This includes sidewalk repairs, curb improvements, pedestrian ramps and crosswalks. Some riders may rely on walking to a station. However, commuter rail station access may have physical barriers and no clear-cut way to navigate to the station with pedestrian access.

UPDATING THE ATLAS AND LAYER DESCRIPTIONS

The Atlas is necessarily a look at the Metrolink service area at a specific point in time. Most of the data utilized in the creation of the Atlas comes primarily from sources, like the U.S. Census, that are updated on an ongoing basis.

In order to account for this, agencies that host Equity Atlases will typically issue updates on a 1 to 2-year cycle. The updates also allow Metrolink to make additions to the data represented in the Atlas, or to change the formula according to which scores are generated. These updates should be undertaken if there is an opportunity to further Metrolink's ability to address barriers to equity, affordability and accessibility in service provision.

Ensuring that the Atlas remains current will require a minimal time investment by Metrolink. The consultant team has provided an overview of the tables where the source data comes from. When data updates are released (as, for example, following the annual release of new Census data), Metrolink will have the ability to produce new versions of the tables included in the Atlas and replace the 2021 version with the most current data.

| Layer	Source	Table	Update Cycle
BIPOC	U.S. Census Bureau	B03002	Annual
Median Household Income	U.S. Census Bureau	S1901	Annual
Limited English Proficiency	U.S. Census Bureau	S1602	Annual
Youth	U.S. Census Bureau	S0101	Annual
Senior	U.S. Census Bureau	S0101	Annual
Zero Household Vehicles	U.S. Census Bureau	B08141	Annual
Rent Burden	U.S. Census Bureau	DP04, B25119	Annual
Pollution Burden	CalEnviroScreen	CalEnviroScreen 3.0	Approximately 3 yrs
Formerly Redlined Communities	Mapping Inequality	N/A	N/A
Adults Without High School Education or Equivalent	U.S. Census Bureau	B15003	Annual
Below 200% Poverty Level	U.S. Census Bureau	B05010	Annual
Persons with Disabilities	U.S. Census Bureau	S1810	Annual
Homeownership	U.S. Census Bureau	S2502	Annual

Detailed Layer Descriptions

The sample maps in this appendix include Metrolink lines, stations, and a three-mile radius from each station. For the purposes of demonstration, most of the layers below are divided into equal quintiles in each layer and in the composite layer (except Redlining layer). Tracts scoring in the lowest quintile for social equity communities are assigned a score of 1, ascending by quintile with scores of 2, 3, 4, and the quintile with strongest representation of vulnerable populations has a score of 5. However, the data can be divided to graphically represent sociodemographic characteristics of each layer in a number of ways and thresholds, depending on Metrolink's analysis goals. For instance, Los Angeles Metro defines Equity Focus Communities (EFCs) in Los Angeles County as census tracts where more than 40% of residents are low-income ($35,000 or lower annual income) and either a) more than 80% of residents are non-white, or b) more than 10% of households do not have access to a private vehicle.

Black, Indigenous, and People of Color (BIPOC)

The Black, Indigenous, and People of Color (BIPOC) layer maps Southern California census tracts based on the share of the population identifying as other than "Non-Hispanic, White Alone" in U.S. Census Bureau data. This data is derived from 2019 5-Year American Communities Survey statistics. It is important to note that given Southern California's enormous diversity, this layer condenses many different cultures, and even may do so within a single census tract.

Race and ethnicity are closely related to equity outcomes, as decades of legal and de facto segregation, discrimination, and exclusion have resulted in BIPOC communities becoming geographically distanced from high-quality housing, services and jobs.

Race and Ethnicity - Black, Indigenous and People of Color (BIPOC) population by census tracts (quintiles)

	Score 1
	Score 2
	Score 3
	Score 4
	Score 5
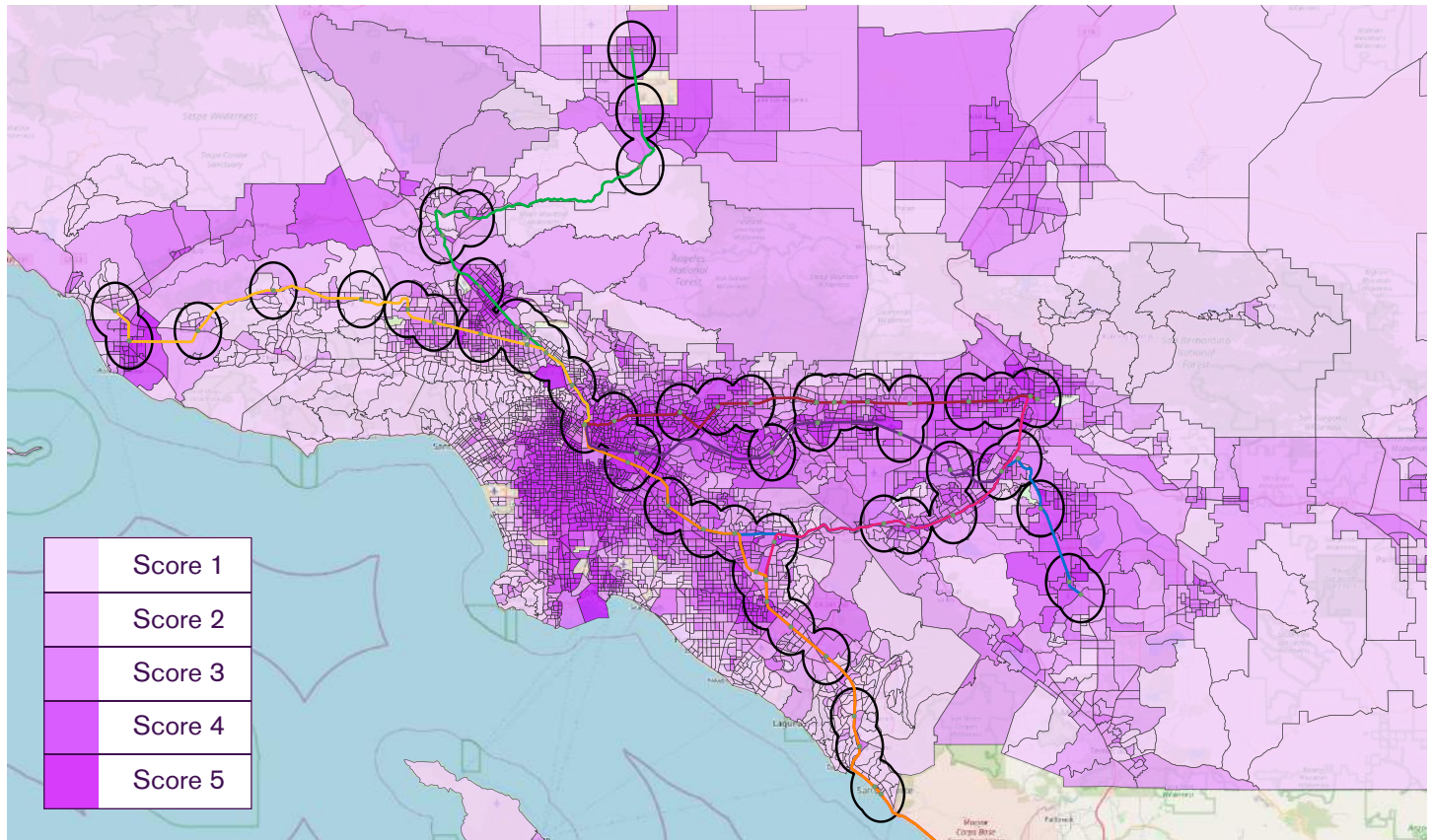
Scoring Rubric

- Tracts with a score of 1 have between 0.0% and 41.2% BIPOC residents.
- Tracts with a score of 2 have between 41.2% and 63.2% BIPOC residents.
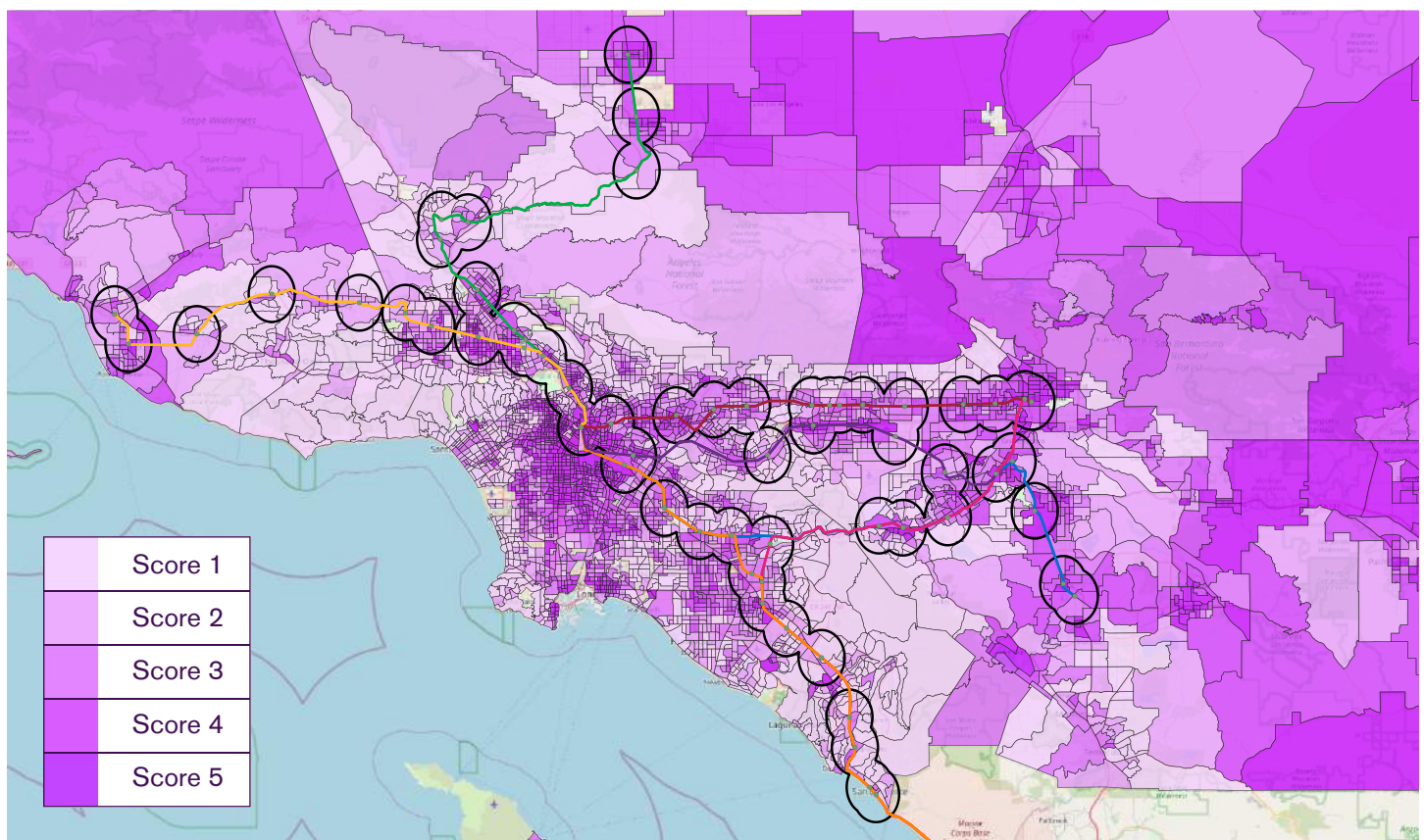- Tracts with a score of 3 have between 63.2% and 82.4% BIPOC residents.
- Tracts with a score of 4 have between 82.4% and 93.6% BIPOC residents.
- Tracts with a score of 5 have between 93.6% and 100.0% BIPOC residents.

Median Household Income

The Median Household Income layer maps Southern California census tracts based on the median annual income in that census tract in U.S. Census Bureau data. Lower average household incomes correspond to higher equity scores. Median household incomes above $250,000 annually are represented as "$250,000+" in ACS data. This data is derived from 2019 5-Year American Communities Survey statistics.

Because the median is an average, it is important to note that low-income communities may exist in census tracts where the median income is higher. This map, however, provides an approximation of where the incidence of lower household incomes is most widespread.[4]

Household Income is directly related to service Accessibility and Affordability as one's means can either provide or prevent access to resources and opportunity. Because Affordability is a type of Accessibility, it should be observed that cost impacts are felt significantly more by lower-income households. These barriers to access act against the greater likelihood of lower-income households to be transit users than their higher-income counterparts.

Median household income - households by census tracts (quintiles)

Scoring Rubric
- Tracts with a score of 1 have a median household income between $100,875 and $250,000.5
- Tracts with a score of 2 have a median household income between $78,264 and $100,875.
- Tracts with a score of 3 have a median household income between $61,733 and $78,264.
- Tracts with a score of 4 have a median household income between $47,083 and $61,733.
- Tracts with a score of 5 have a median household income between $9,191 and $47,083.

Limited English Proficiency

The Limited English Proficiency layer maps Southern California census tracts based on the share of the population identified as speaking English less than 'Very Well' in U.S. Census Bureau data. This data is derived from 2019 5-Year American Communities Survey statistics.

In the United States, there are Accessibility impacts for those with a limited command of English. These impacts can be informational, limiting the ability of individuals to independently meet their own service needs. They may also be social, limiting the ability of individuals to acquire the help that they need to receive services. Limited English proficiency can also limit economic opportunities for Southern Californians, keeping them out of higher-income employment opportunities and isolating them from service provision.

Limited English speaking residents - population by census tracts (quintiles)

|	
	Score 1
	Score 2
	Score 3
	Score 4
	Score 5
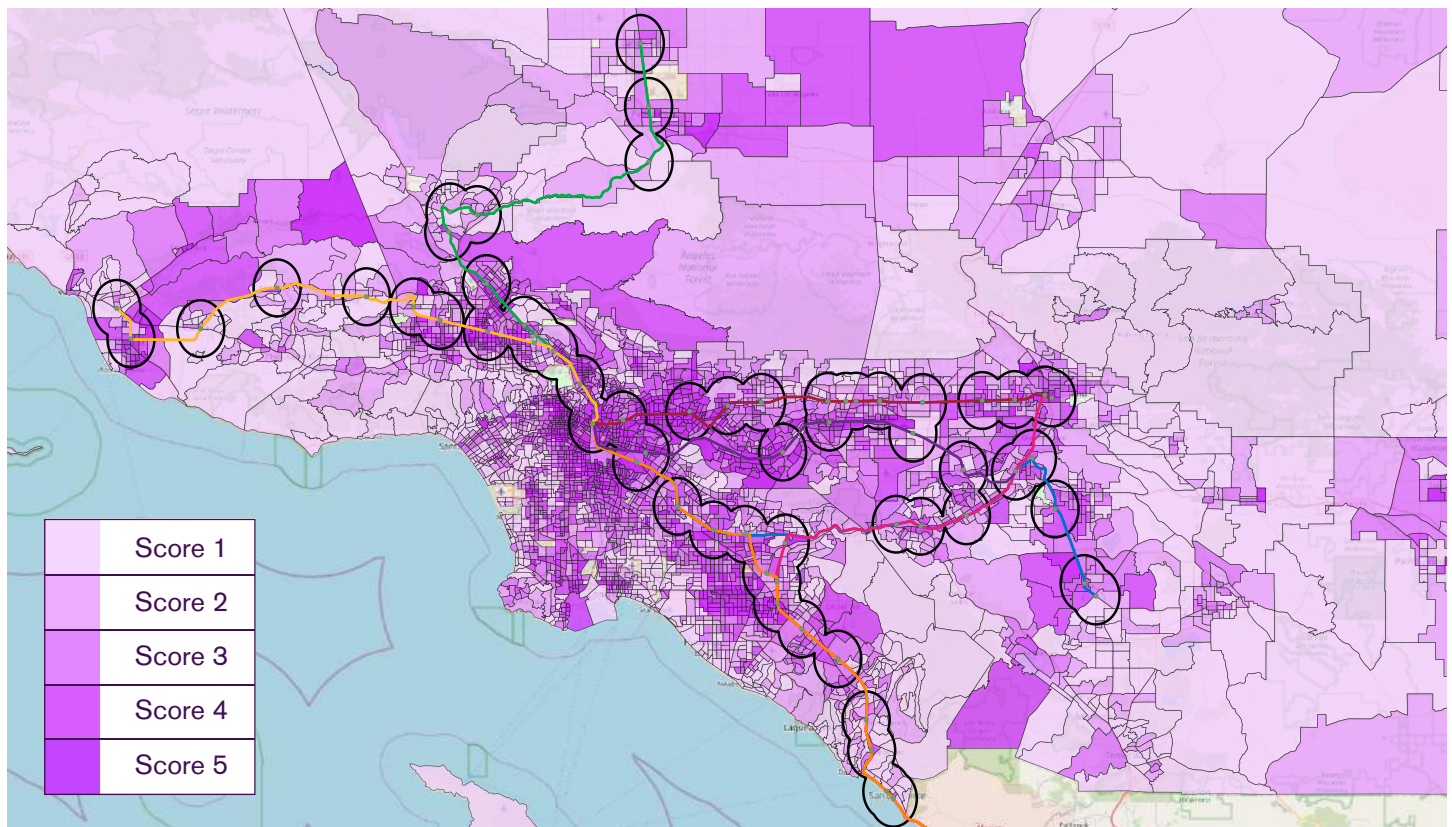
Scoring Rubric

- Tracts with a score of 1 have between 0.0% and 3.0% limited English-speaking residents
- Tracts with a score of 2 have between 3.0% and 6.3% limited English-speaking residents.
- Tracts with a score of 3 have between 6.3% and 11.0% limited English-speaking residents.
- Tracts with a score of 4 have between 11.0% and 18.3% limited English-speaking residents.
- Tracts with a score of 5 have between 18.3% and 100.0% limited English-speaking residents.

Youths

The Youth layer maps Southern California census tracts based on the share of the population that is under 18 years of age according to U.S. Census Bureau data. This data is derived from 2019 5-Year American Communities Survey statistics.

The prevalence of minors in a census tract is a proxy for specific Accessibility and Affordability concerns. First, the greater the proportion of children in an area, the larger that average household size is likely to be. This means there are likely fewer income earners providing for relatively more dependents. Additionally, the prevalence of younger children and families corresponds to specific types of physical Accessibility barriers that should be accounted for. These might include, for example, changing stations and space for strollers.

Residents under the age of 18 - population by census tracts (quintiles)
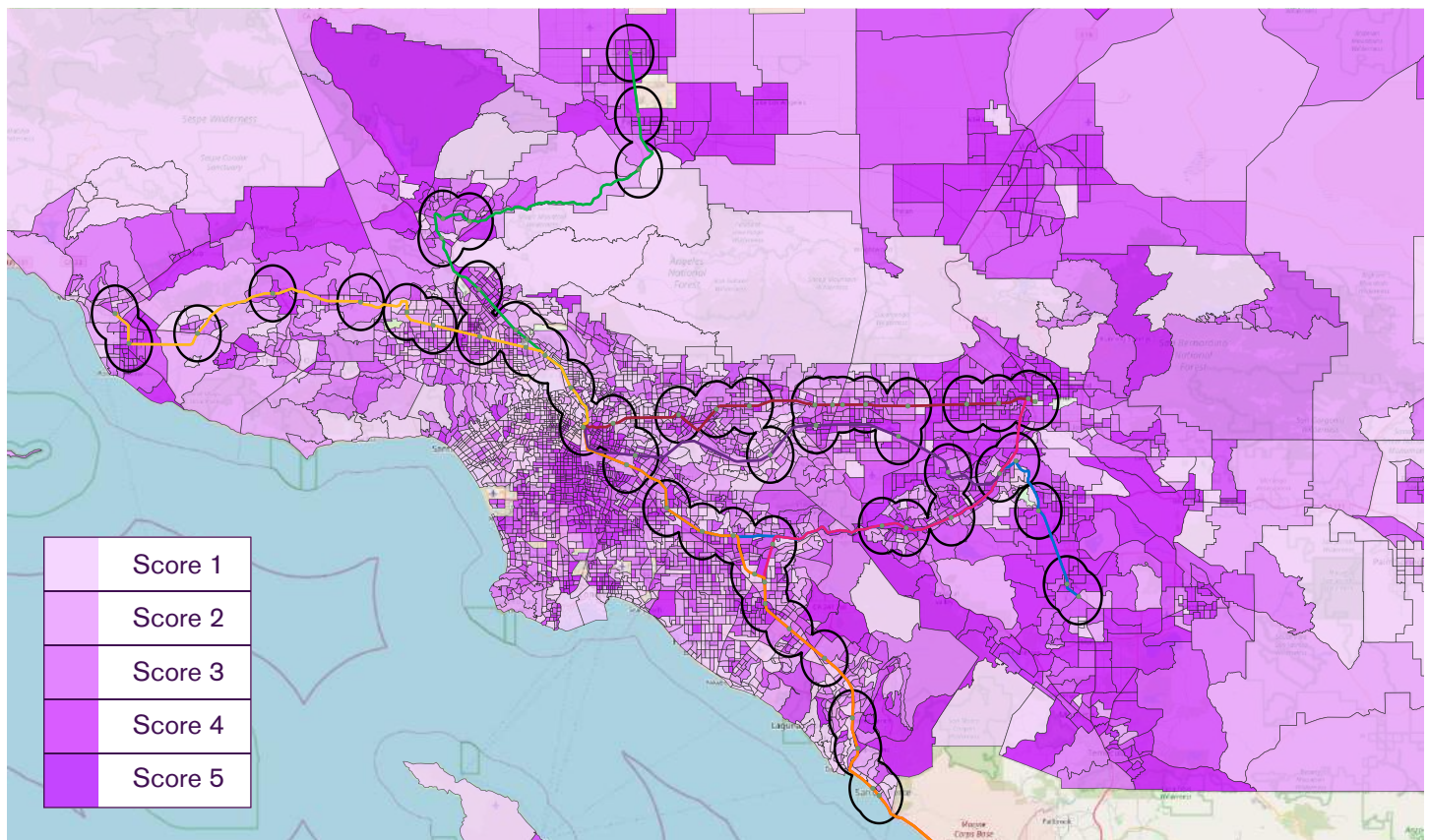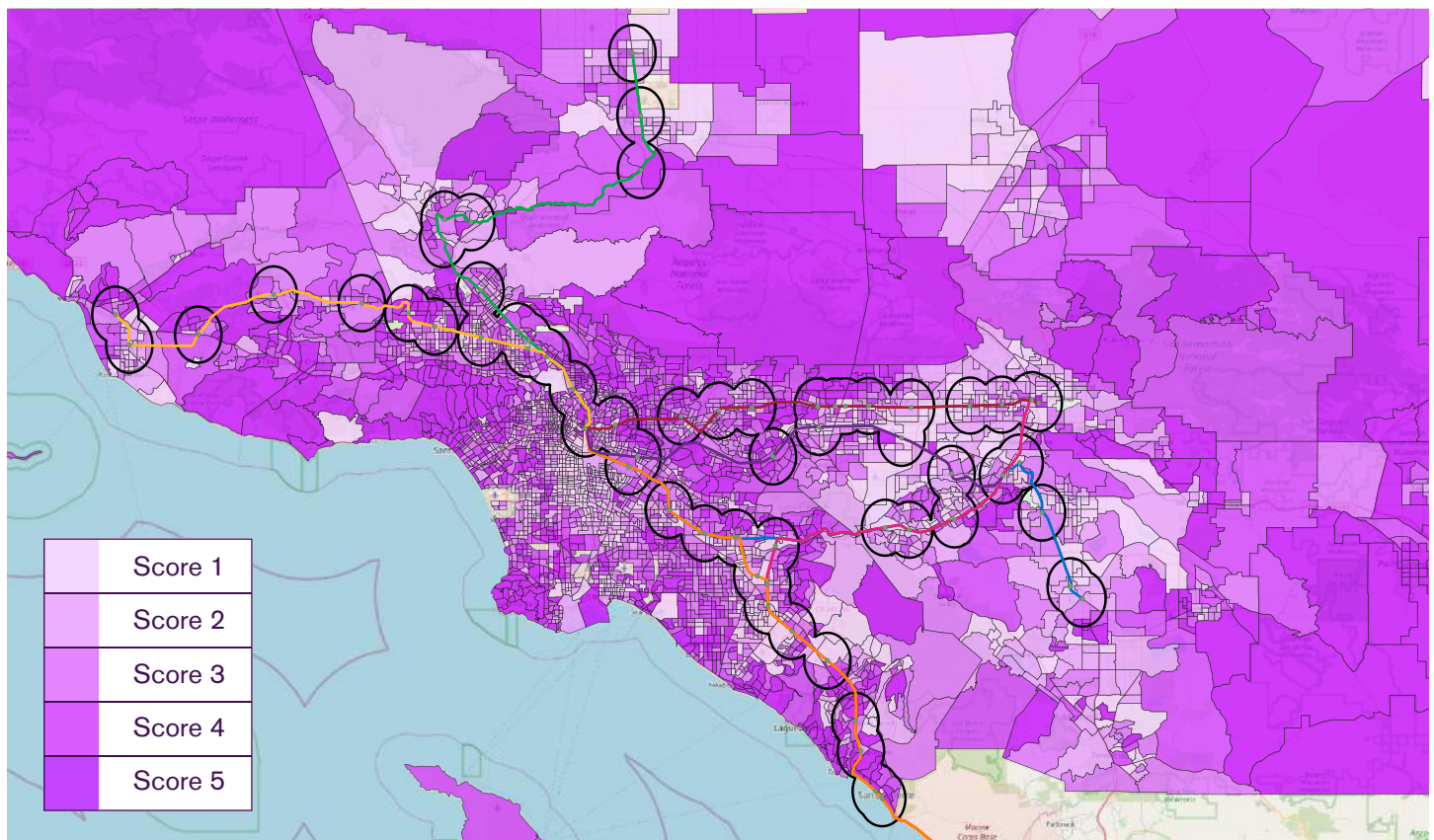

Scoring Rubric
- Tracts with a score of 1 have between 0.0% and 17.2% residents who are children under the age of 18
- Tracts with a score of 2 have between 17.2% and 20.9% residents who are children under the age of 18.
- Tracts with a score of 3 have between 20.9% and 23.9% residents who are children under the age of 18.
- Tracts with a score of 4 have between 23.9% and 27.9% residents who are children under the age of 18.
- Tracts with a score of 5 have between 27.9% and 57.7% residents who are children under the age of 18.

Seniors

The Seniors layer maps Southern California census tracts based on the share of the population 65 years old or older according to U.S. Census Bureau data. This data is derived from 2019 5-Year American Communities Survey statistics.

Prevalence of senior residents has direct impacts on the Accessibility and Affordability of Metrolink service. Seniors are more likely to be living on a fixed income than younger residents. They are also more likely to require additional accommodation or consideration for physical access to be practicable.

Residents over the age of 65 - population by census tracts (quintiles)

	Score 1
	Score 2
	Score 3
	Score 4
	Score 5

Scoring Rubric

- Tracts with a score of 1 have between 0.0% and 8.3% residents who are seniors aged 65 or older.
- Tracts with a score of 2 have between 8.3% and 11.1% residents who are seniors aged 65 or older.
- Tracts with a score of 3 have between 11.1% and 14.3% residents who are seniors aged 65 or older.
- Tracts with a score of 4 have between 14.3% and 18.8% residents who are seniors aged 65 or older.
- Tracts with a score of 5 have between 18.8% and 100.0% residents who are seniors aged 65 or older.

Zero Vehicle Households

The Zero Vehicle Households layer maps Southern California census tracts based on the share of households identified as having no access to a private vehicle in U.S. Census Bureau data. This data is derived from 2019 5-Year American Communities Survey statistics.

Lack of access to a private vehicle has direct Accessibility and Equity implications. Households that do not have the ability to utilize a car to get to their destinations are more likely to be transit riders. However, they are also more susceptible to becoming isolated from economic opportunities across the region. A lack of access to a private vehicle can some-times (but does not always) indicate lower incomes or other social barriers, particularly in a car-centric and decentralized region such as the Metrolink service area.

No vehicle access - households by census tracts (quintiles)

	Score 1
	Score 2
	Score 3
	Score 4
	Score 5
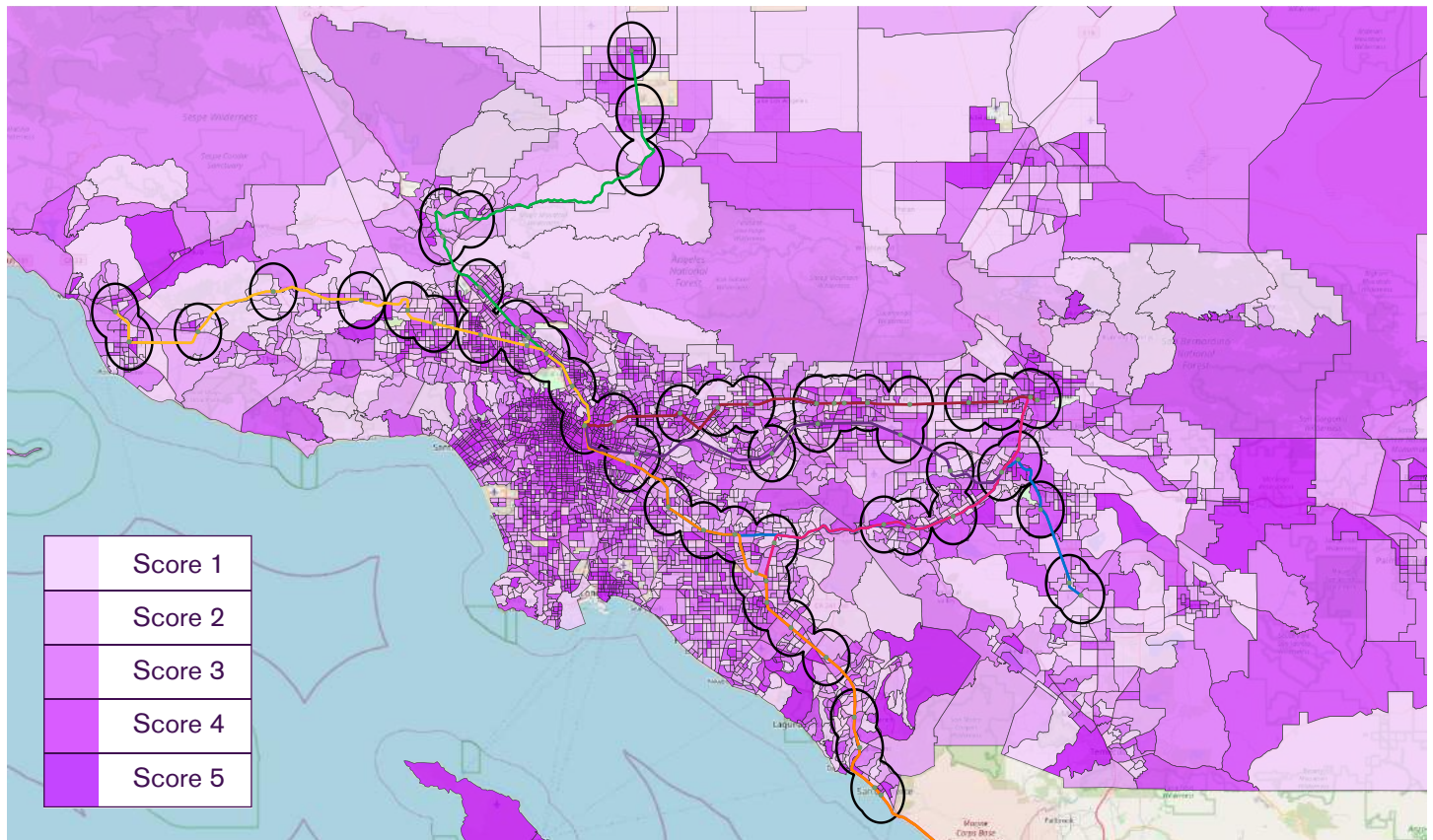
Scoring Rubric

- Tracts with a score of 1 have between 0.0% and 0.4% households that do not have access to a vehicle.
- Tracts with a score of 2 have between 0.4% and 1.2% households that do not have access to a vehicle.
- Tracts with a score of 3 have between 1.2% and 2.4% households that do not have access to a vehicle.
- Tracts with a score of 4 have between 2.4% and 4.6% households that do not have access to a vehicle.
- Tracts with a score of 5 have between 4.6% and 78.7% households that do not have access to a vehicle

Rent Burden

The Rent Burden layer identifies Southern California census tracts where high median rent prices and low median annual incomes intersect. Rent burden is a metric that assesses the amount of a household's income that is required to pay for housing costs, typically the largest cost borne by a household. The data in this layer is derived from U.S. Census Bureau products, but the ACS does not directly track median rent burden. To create this layer, the median rent paid in a census tract is compared with the median household income for a renting household. This is not the same as assessing the rent burden for the median household in a district, however this layer provides one approximation of where the ratio of rent to income is felt most acutely in the region.

Rent Burden is a metric that assesses the likelihood that the cost of housing (generally the highest single cost for a given household) is impacting a household's ability to access other necessaries of life, such as transportation options. Where Rent Burden is higher, the Accessibility of the Metrolink service is likely a more pressing issue.

It is important to note that the Census Bureau does not track median rent burden. This dataset is derived by consultants to approximate what the average experience rent burden within a census tract looks like. That said, there are reasons to expect that there is not a perfect correspondence between median-income earners and median rent payers. For some households within a tract, therefore, the situation may be better or worse than described, but the characteristic behavior of this ratio is believed to be useful for assessing the relationship between rent and income on the whole.

Rent Burden - households by census tracts (quintiles)

|	
	Score 1
	Score 2
	Score 3
	Score 4
	Score 5
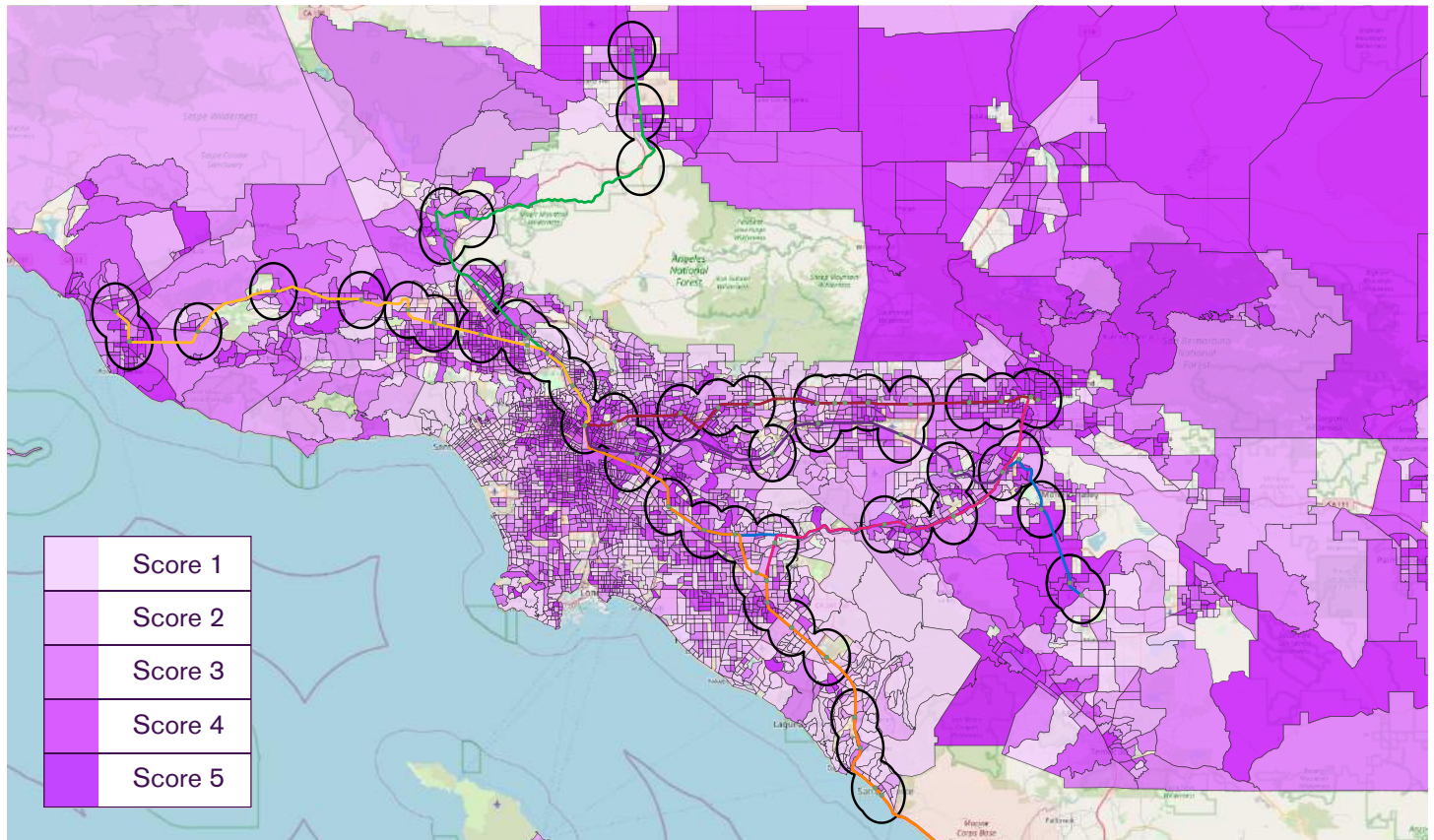
Scoring Rubric

- In tracts with a score of 1, the median annual rent is equal to between 3.7% and 16.6% of the median annual income for a renting household.
- In tracts with a score of 2, the median annual rent is equal to between 16.6% and 23.2% of the median annual income for a renting household.
- In tracts with a score of 3, the median annual rent is equal to between 23.2% and 30.3% of the median annual income for a renting household.
- In tracts with a score of 4, the median annual rent is equal to between 30.3% and 41.7% of the median annual income for a renting household.
- In tracts with a score of 5, the median annual rent is equal to between 41.7% and >100.0% of the median annual income for a renting household.[6]

Pollution Burden

The Pollution Burden layer maps Southern California census tracts according to the pollution burden score attributed to them as part of the state of California's CalEnviroScreen data project. CalEnviroScreen uses a formula of the prevalence of different pollutants throughout the state to generate scores. This data is derived from the CalEnviroScreen 3.0 update released in 2018.

Pollution Burden has health impacts that directly affect Accessibility and Equity barriers to Metrolink service. In communities with a greater Pollution Burden, there is likely to be a greater prevalence of chronic illnesses such as asthma and certain cancers. In turn, these chronic illnesses may directly affect the ability of Southern California residents to afford Metrolink service. These impacts may be the product of environmental racism that have shaped Southern California communities for decades.

Pollution burden - by census tract (quintiles)
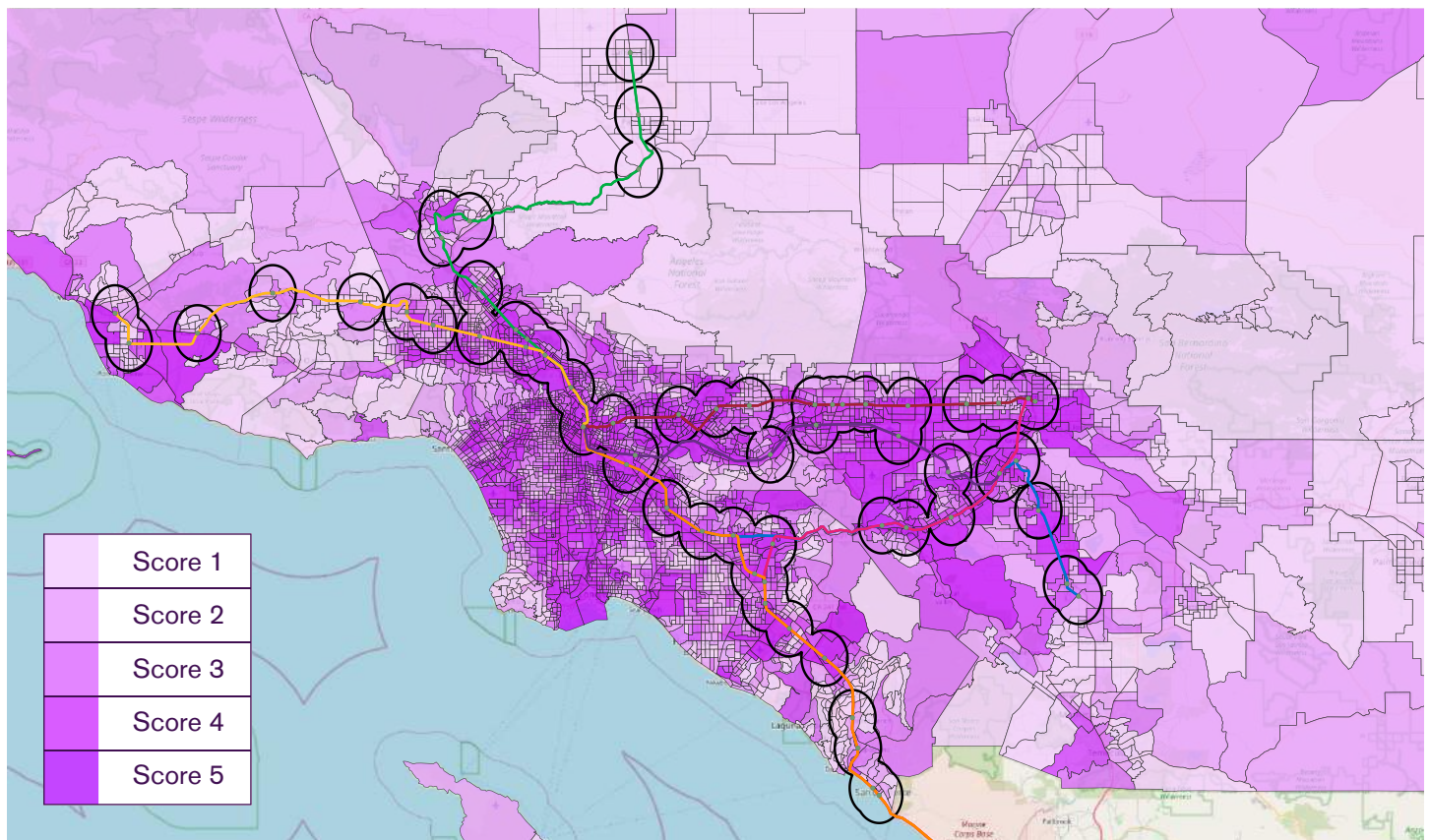
Scoring Rubric
- Tracts with a score of 1 have a pollution score between 8.4 and 30.1.
- Tracts with a score of 2 have a pollution score between 30.1 and 38.1.
- Tracts with a score of 3 have a pollution score between 38.1 and 45.5.
- Tracts with a score of 4 have a pollution score between 45.5 and 53.1.
- Tracts with a score of 5 have a pollution score between 53.1 and 81.2.

Formerly Redlined Communities

The Former Redlined Communities layer maps Southern California census tracts whether they were, wholly or in part, included in redlining maps issued by the federal government during the 20th century. These census tracts were designated "D" by the Home Owners' Loan Corporation (HOLC), during the mid-20th century on scale of A through D. "D" designated tracts were considered "hazardous," were excluded from financial services such as loans, had low home ownership rates, and were often categorized as such based on the presence of people of color. The data in this layer was derived from the Mapping Inequality project, a joint project by the University of Richmond, Virginia Tech, the University of Maryland, and the Johns Hopkins University.

Redlining during the 20th century was one of the enduring sources of inequity within U.S. communities. The disinvestment and concentration of disamenities spurred on by redlining has created legacies that endure until this day. Formerly redlined communities are more likely to have poorly maintained infrastructure and to be within low-income communities of color. This data provides critical historical context to contemporary inequities and also serves to potentially illuminate shifting populations or more recent residential displacement.

This layer assigns a binary score of 5 or 0 based on whether the census tract was at least partially within a redlined community or not.

### Redlining - census tract (binary score)
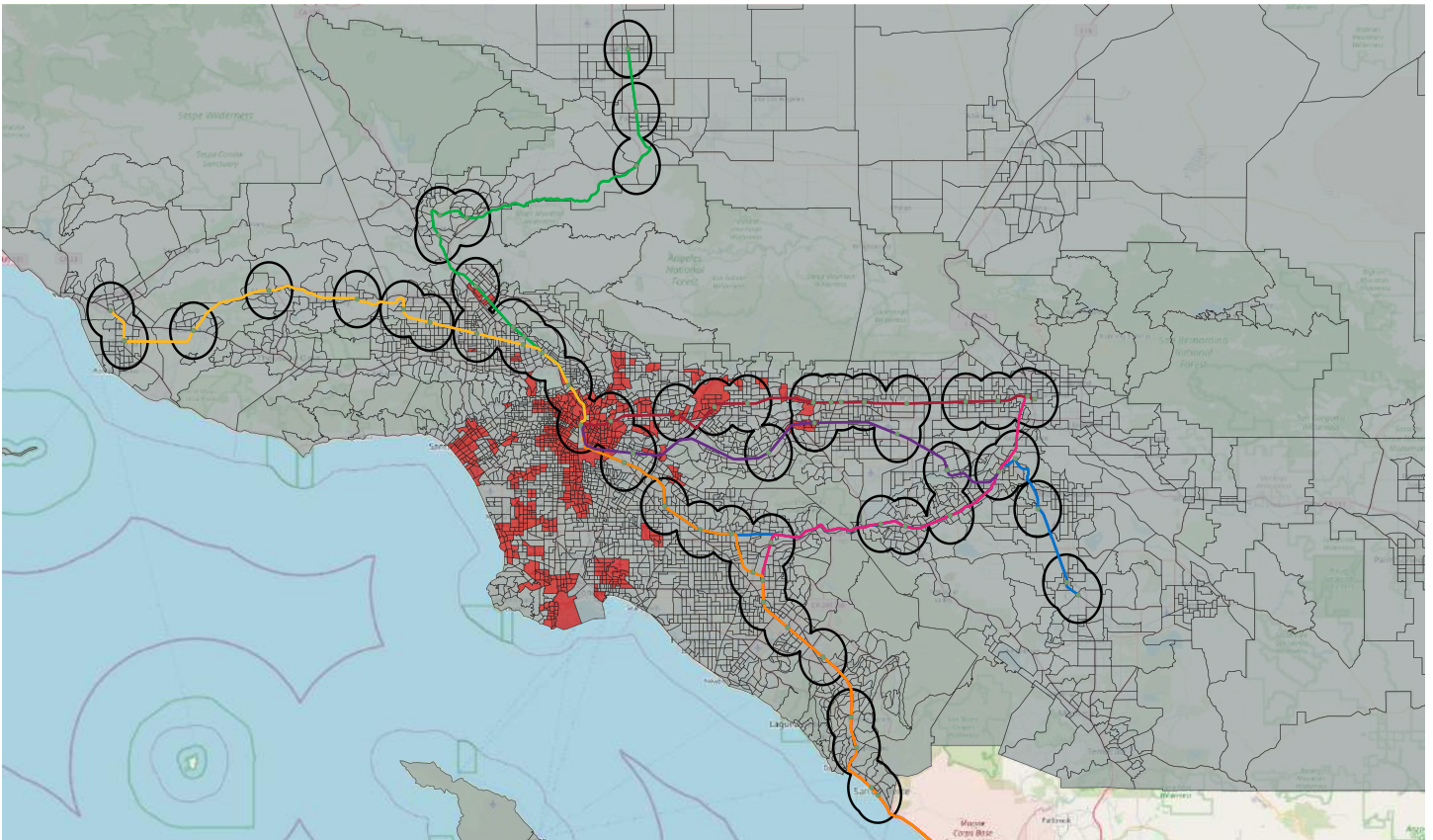
Scoring Rubric

• Tracts with a score of 5 were historically redlined with a HOLC score of "D".

• Tracts with a score of 0 were either not redlined or received a HOLC score of A, B, or C.

Adults Without High School Diploma or Equivalent

The Adults Without High School Diploma or Equivalent layer maps Southern California census tracts according to the share of the adult population that identifies as not having achieved the equivalent of at least a high school education. The data in this layer is derived from the U.S. Census Bureau's 2019 5-Year American Community Survey.

Education can be a key determinant in the ability of a Southern Californian to access high-paying employment opportunities. Further, educational attainment rates can illustrate existing and past barriers to high-quality education or other impediments to opportunity. Education is therefore correlated to increased difficulty to afford and access Metrolink service.

Education - population by census tracts (quintiles)

	Score 1
	Score 2
	Score 3
	Score 4
	Score 5
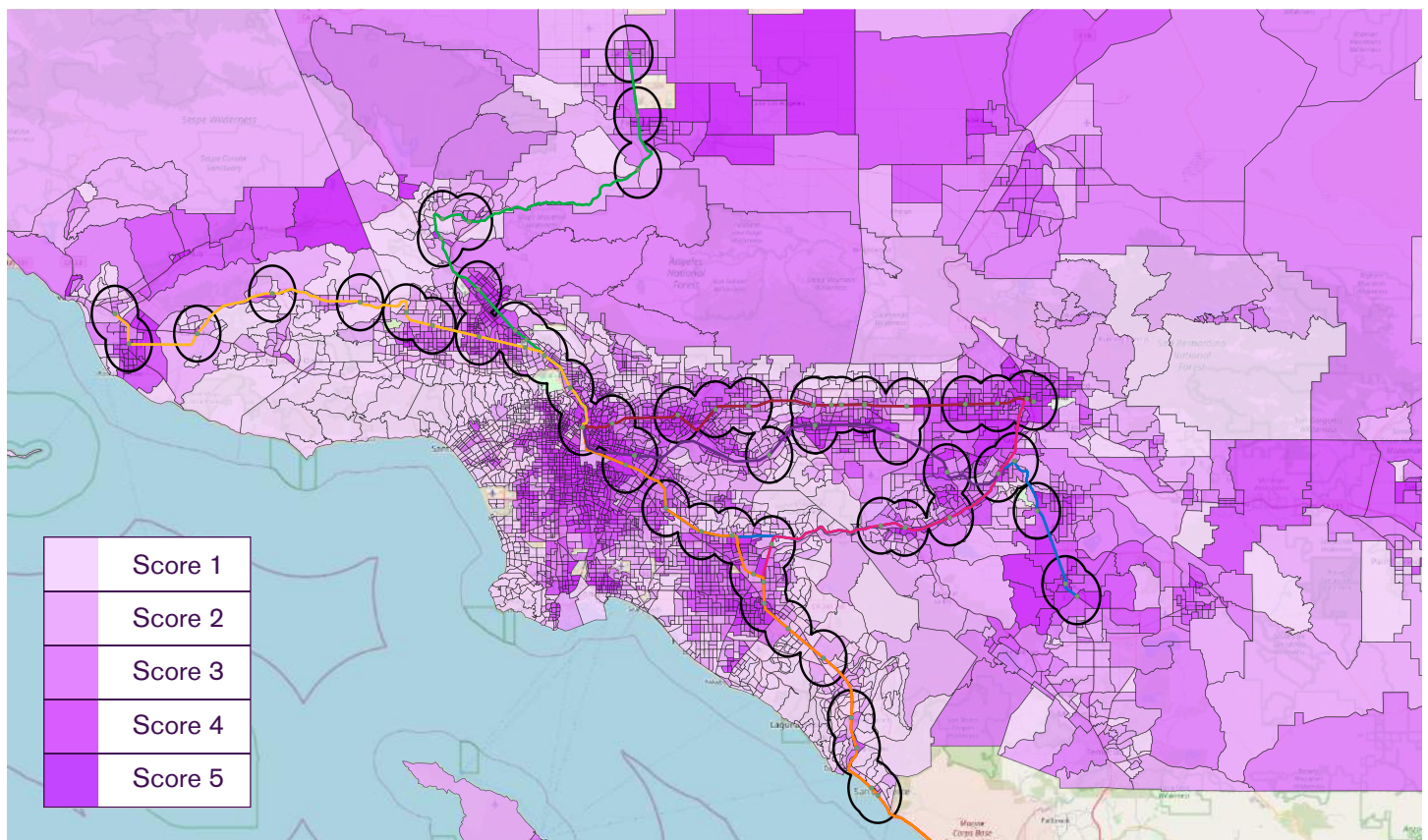
Scoring Rubric

- Tracts with a score of 1 have between 0.0% and 5.4% of residents without a high school degree or equivalent.
- Tracts with a score of 2 have between 5.4% and 11.5% of residents without a high school degree or equivalent.
- Tracts with a score of 3 have between 11.5% and 21.8% of residents without a high school degree or equivalent.
- Tracts with a score of 4 have between 21.8% and 34.8% of residents without a high school degree or equivalent.
- Tracts with a score of 5 have between 34.8% and 72.9% of residents without a high school degree or equivalent.
- Tracts with a score of 5 have a pollution score between 53.1 and 81.2.

Below 200% Poverty Level

The Below 200% Poverty Level layer maps census tracts in Southern California according to the prevalence of households where the annual income is less than 200% of the federal poverty line according to U.S. Census Bureau data. The data in this layer is derived from the 2019 5-Year American Community Survey.

While the federal government sets a national standard for what is considered poverty, in high cost-of-living areas, the federal line is too low to accurately capture the extent of households living in poverty. These conditions which exist in Southern California and many other metropolitan areas along the West Coast have led agencies to begin using 200% or double the federal poverty line as a more accurate approximation of the households living in poverty.

The determination of whether or not a household falls under or over the poverty line is based on the number of individuals included in the household. In 2019, the poverty line for a 3-person household was $21,330 per year. Whereas the Median Household Income layer compares the income of each census tract to all others within Southern California, the Below 200% Poverty Level layer is assessing the number of households that live beneath an absolute income level.

Below 200% Poverty Level - population by census tracts (quintiles)

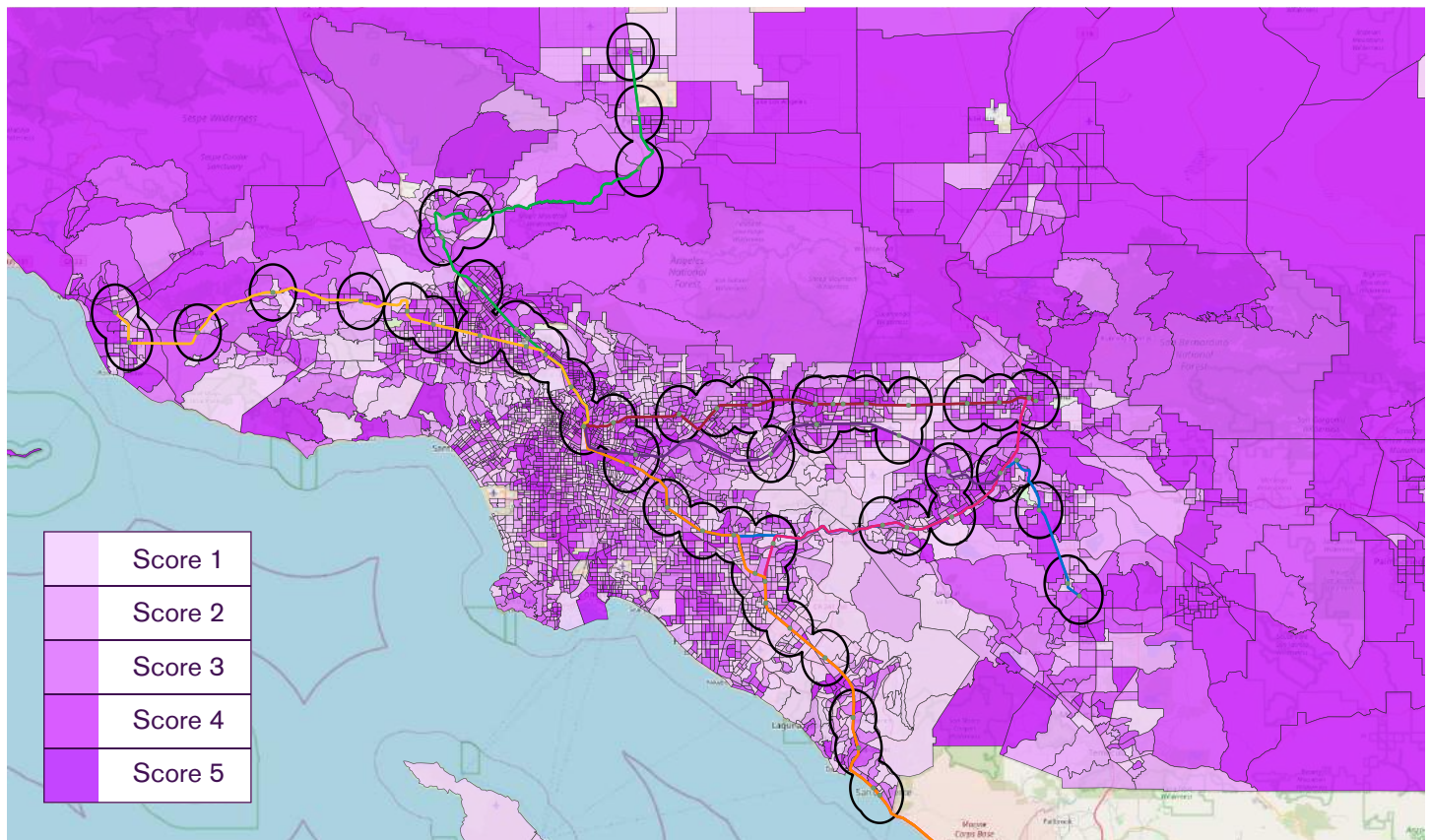| Score 1 |
| Score 2 |
| Score 3 |
| Score 4 |
| Score 5 |
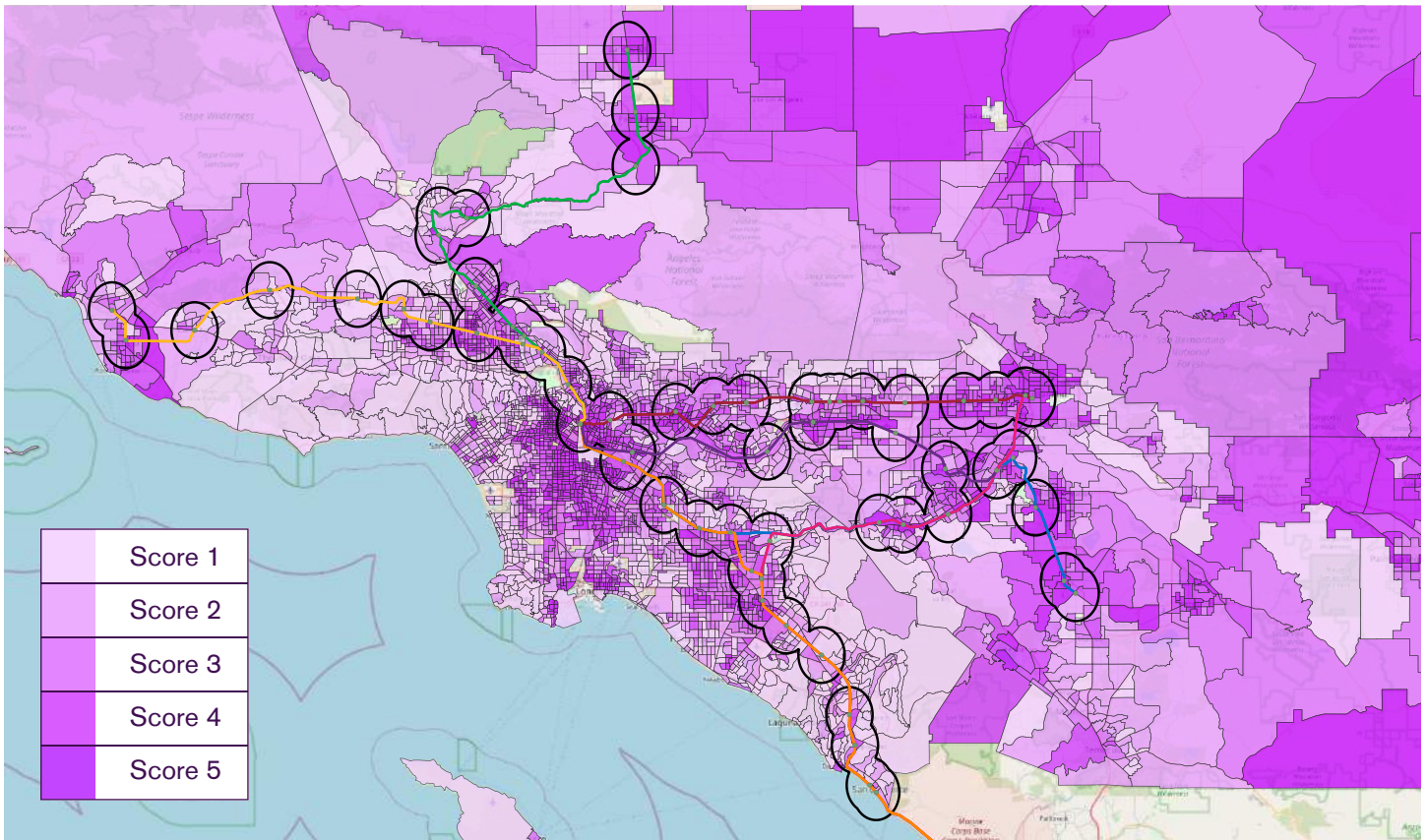
Scoring Rubric

- Tracts with a score of 1 have between 0.0% and 13.5% of residents living below 200% of the federal poverty line.
- Tracts with a score of 2 have between 13.5% and 30.0% of residents living below 200% of the federal poverty line.
- Tracts with a score of 3 have between 30.0% and 47.8% of residents living below 200% of the federal poverty line.
- Tracts with a score of 4 have between 47.8% and 66.2% of residents living below 200% of the federal poverty line.
- Tracts with a score of 5 have between 66.2% and 100% of residents living below 200% of the federal poverty line.
- Tracts with a score of 5 have a pollution score between 53.1 and 81.2.

Persons with Disabilities

The Persons with Disabilities layer maps Southern California census tracts based on the share of the population identifying as living with at least one disability as tracked by the U.S. Census Bureau. The data in this layer is derived from the 2019 5-Year American Community Survey.

Living with a disability can pose clear challenges to the ability of individuals to access transit. These challenges form the basis for the infrastructural access requirements enshrined in the federal Americans with Disabilities Act.

Persons with disabilities - population by census tracts (quintiles)
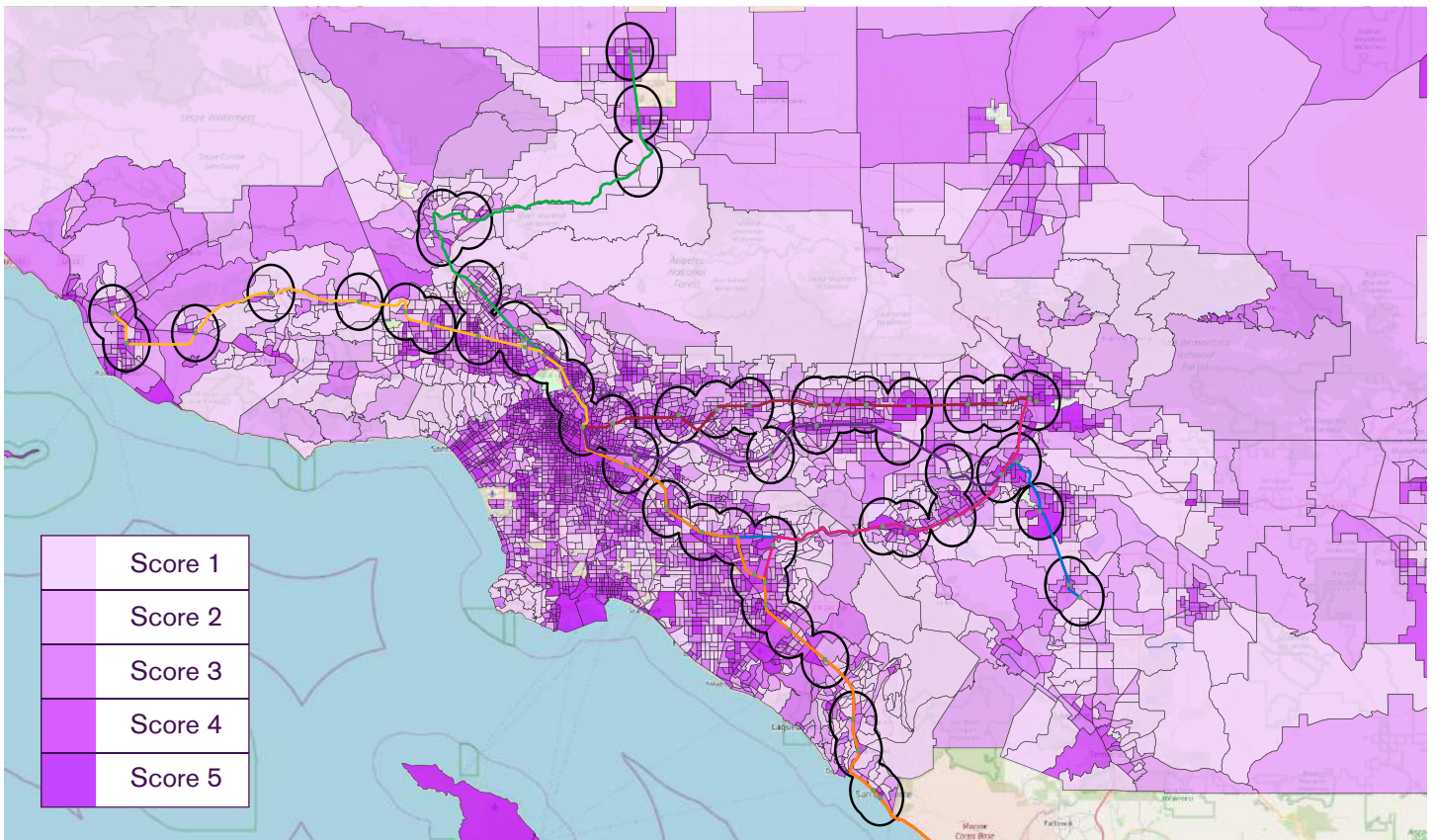

Score 1
Score 2
Score 3
Score 4
Score 5

Scoring Rubric
- Tracts with a score of 1 have between 0.0% and 7.3% of residents living with at least one disability.
- Tracts with a score of 2 have between 7.3% and 9.0% of residents living with at least one disability.
- Tracts with a score of 3 have between 9.0% and 10.6% of residents living with at least one disability.
- Tracts with a score of 4 have between 10.6% and 12.9% of residents living with at least one disability.
- Tracts with a score of 5 have between 12.9% and 100.0% of residents living with at least one disability.

Homeownership

The Homeownership layer maps Southern California census tracts based on the share of households that live in a home they own based on U.S. Census Bureau data. Lower rates of homeownership correspond to higher scores. The data in this layer is derived from the 2019 5-Year American Community Survey.

Homeownership rate by census tracts (quintiles)

Score 1	
Score 2	
Score 3	
Score 4	
Score 5	

Scoring Rubric

- Tracts with a score of 1 have between 77.4% and 100.0% of households living in owner-occupied housing.
- Tracts with a score of 2 have between 62.9% and 77.4% of households living in owner-occupied housing.
- Tracts with a score of 3 have between 46.7% and 62.9% of households living in owner-occupied housing.
- Tracts with a score of 4 have between 27.7% and 46.7% of households living in owner-occupied housing.
- Tracts with a score of 5 have between 0.0% and 27.7% of households living in owner-occupied housing.

Composite Layer

The Composite layer for the Atlas is made up of census tracts throughout the five-county region. Each census tract is assigned a score between 1 and 5 as follows. A Composite Raw Score is generated for each census tract by adding up that tract's score according to each of the ten individual layers. The Composite Raw Score is a number between 0 and 65. A Census Tract Percentile is assigned to each of the Composite Raw Scores within the five-county region. Final Composite Scores are then assigned to each census tract based on the percentile. Tracts scoring in the lowest quintile for social equity communities are assigned a score of 1, and those in the highest quintile for social equity communities are assigned a score of 5.

The resulting map is displayed below. Highest scoring census tracts are indicated in red, followed by orange, yellow, green, and blue. Metrolink routes and stations are also indicated on the map, with three-mile catchment areas as approximation for the communities surrounding each individual stop.

The Composite Layer of the Atlas shows that a more or less contiguous region of highest impact stretches from the Central Los Angeles Basin to South Los Angeles and east to the inner San Gabriel Valley. It is important to note that while this region is uniformly high scoring, it is composed of many different communities whose particular needs and barriers to equity differ. In parsing the needs of individual communities, Metrolink will find it useful to reference the individual layers of the Atlas to determine how the agency should approach individual projects in social equity communities.

Composite layer of Metrolink service area

Legend:
- Score 1
- Score 2
- Score 3
- Score 4
- Score 5
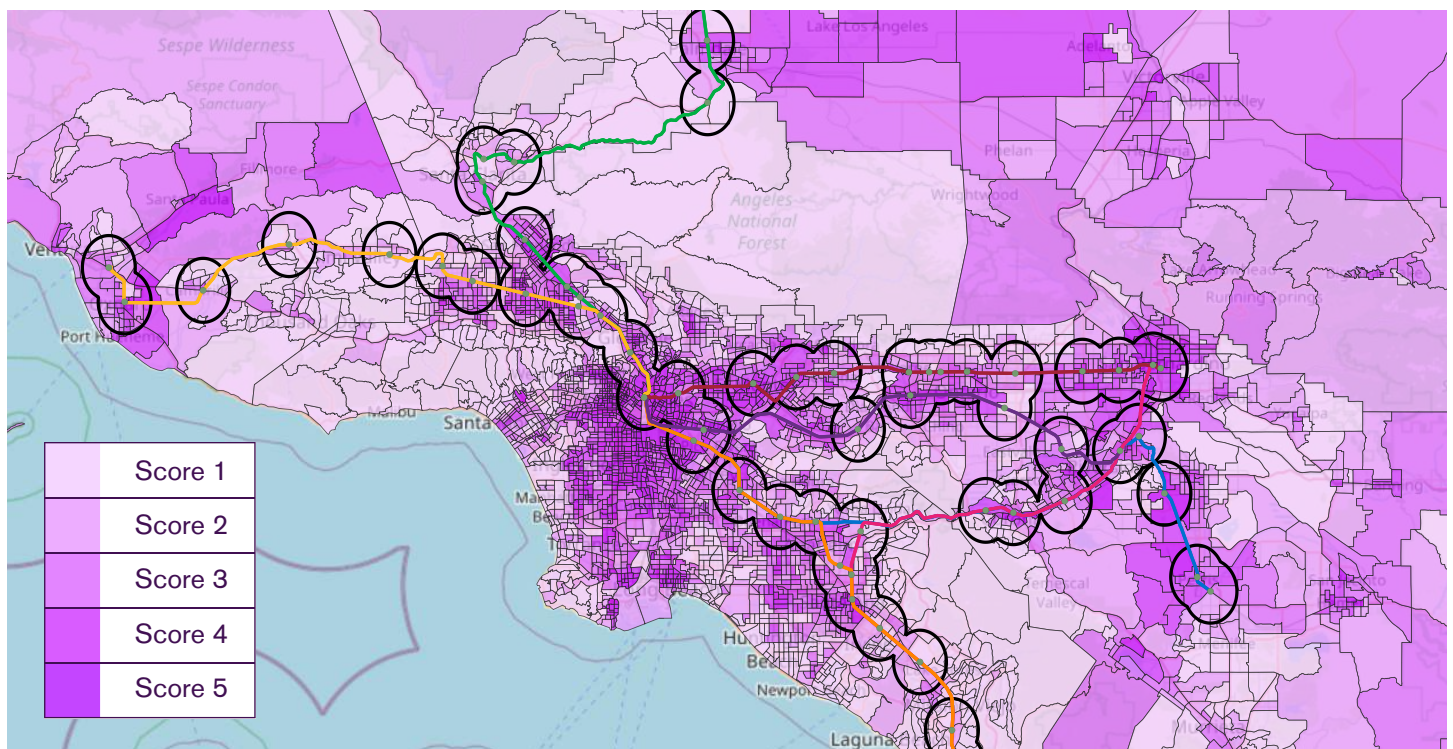
Los Angeles Basin

The current Metrolink system passes through the easternmost section of the Los Angeles Basin. The Basin is the largest job center for the five-county region, as well as being a major population center.

All of Downtown Los Angeles and parts of eastern Hollywood and South Los Angeles are within three miles of existing Metrolink stations.

Individual tracts in the Los Angeles Basin score highly on many or all of the individual layer scores. Additionally, the inner city area of Los Angeles contains many of the Southern California communities that were redlined during the 20th Century.


	Score 1
	Score 2
	Score 3
	Score 4
	Score 5
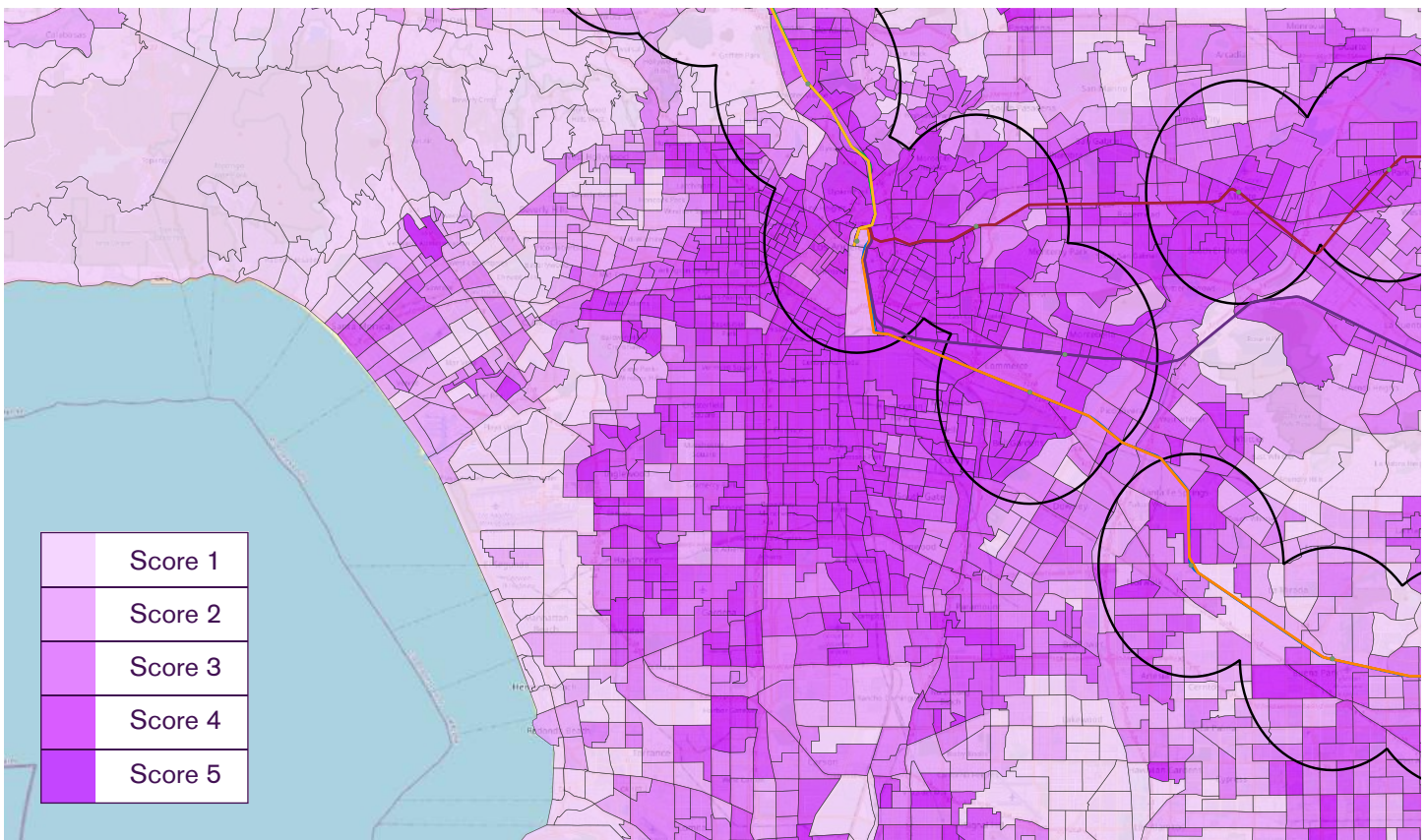
San Fernando Valley and Santa Clarita Valley

The San Fernando Valley in Los Angeles County contains many high-need census tracts. Metrolink's existing service provides coverage within a three-mile radius for broad swath of the area. High-need communities include the city of San Fernando, and neighborhoods of Los Angeles, such as Pacoima, Panorama City and Van Nuys. The Santa Clarita Valley to the north is predominantly composed of lower-scoring communities.

|	
	Score 1
	Score 2
	Score 3
	Score 4
	Score 5
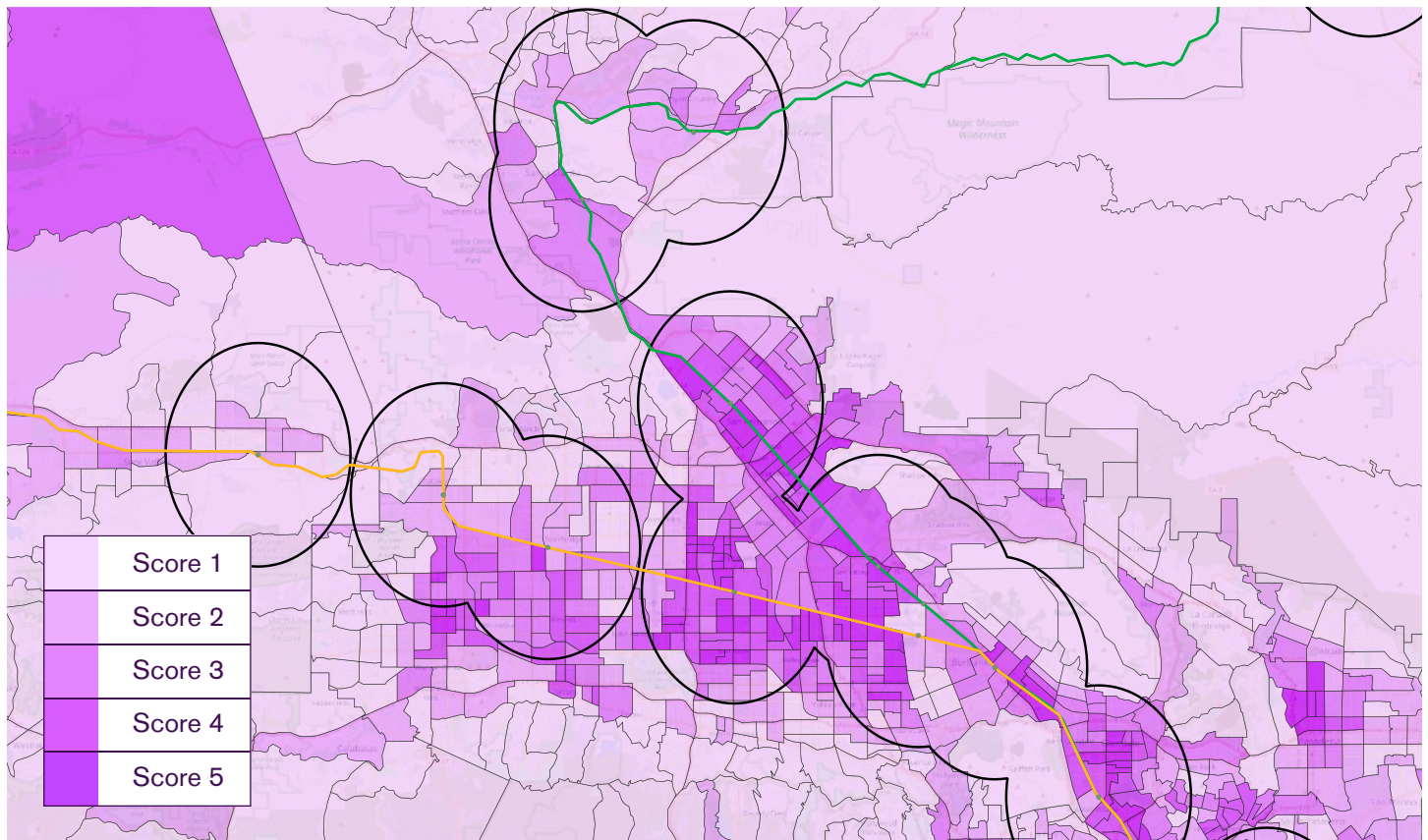
San Gabriel Valley

The San Gabriel Valley in Los Angeles County contains many high-need census tracts based on the Composite score. In particular, the inner San Gabriel Valley and tracts surrounding existing Metrolink routes contain communities with many senior and linguistically-isolated populations. The San Gabriel Valley also contains an area of high need that is along the San Bernardino Line but outside of the catchment of any existing station. This gap can be seen in between the Cal State Los Angeles and El Monte stations.

|	
	Score 1
	Score 2
	Score 3
	Score 4
	Score 5
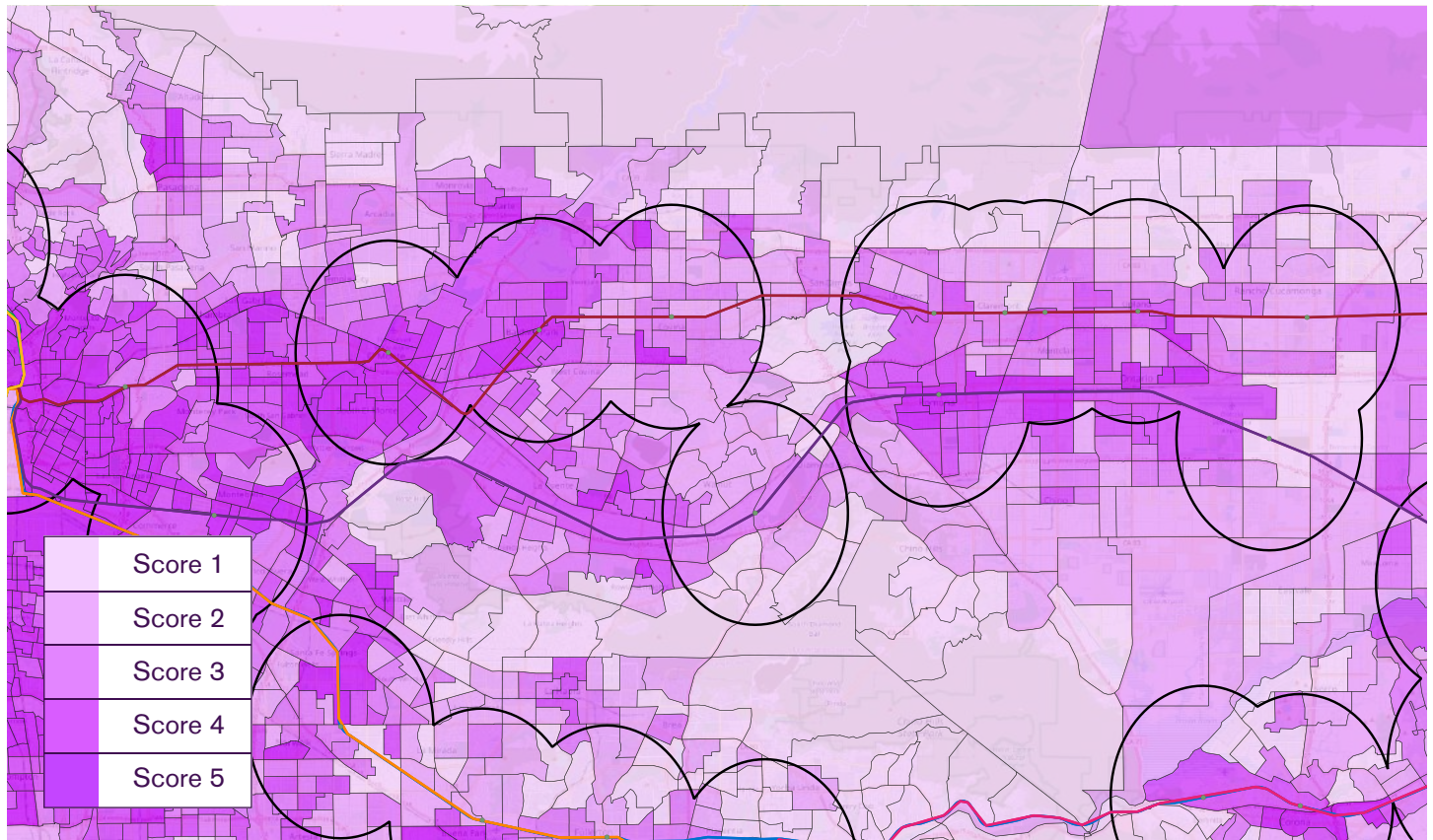
Inland Empire

The areas of high need in the Inland Empire are less contiguous than in Los Angeles County, but in general are clustered around existing Metrolink routes. Central San Bernardino, Riverside, Corona, Fontana, and tracts along the 91/Perris route show areas of high need.

|	
	Score 1
	Score 2
	Score 3
	Score 4
	Score 5
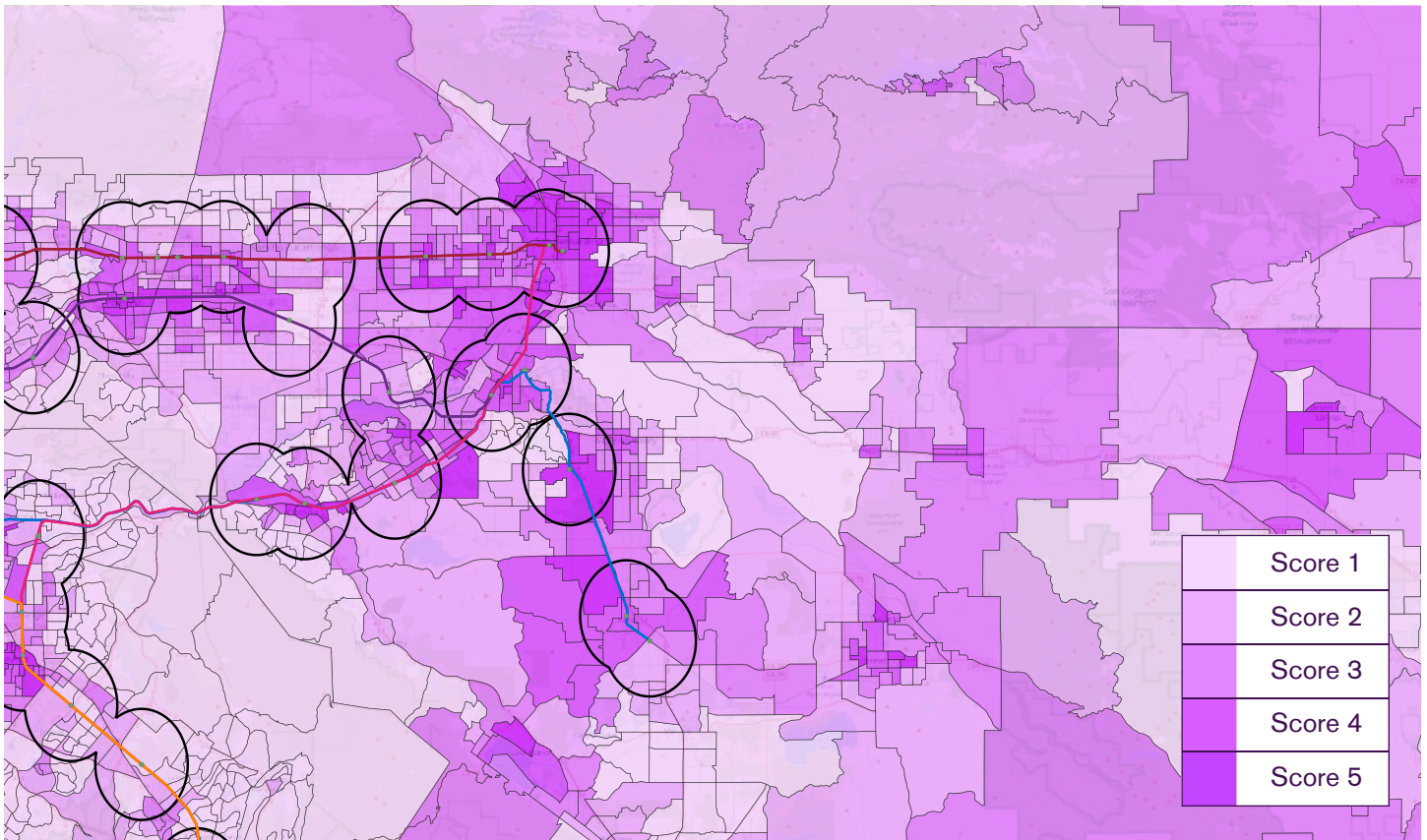
Orange County

There is a characteristic division within Orange County between the northern and southern halves of the county (roughly divided by the 55 freeway). While southern Orange County has some moderate scoring tracts, it is mostly composed of lower-scoring communities. Conversely, northern Orange County has communities of higher need both on existing Metrolink routes and away from them.

Central Santa Ana, Anaheim, and Buena Park all have high-scoring communities, while Garden Grove and Westminster stand out as having social equity communities away from existing tracks.

| Score 1 |
| Score 2 |
| Score 3 |
| Score 4 |
| Score 5 |
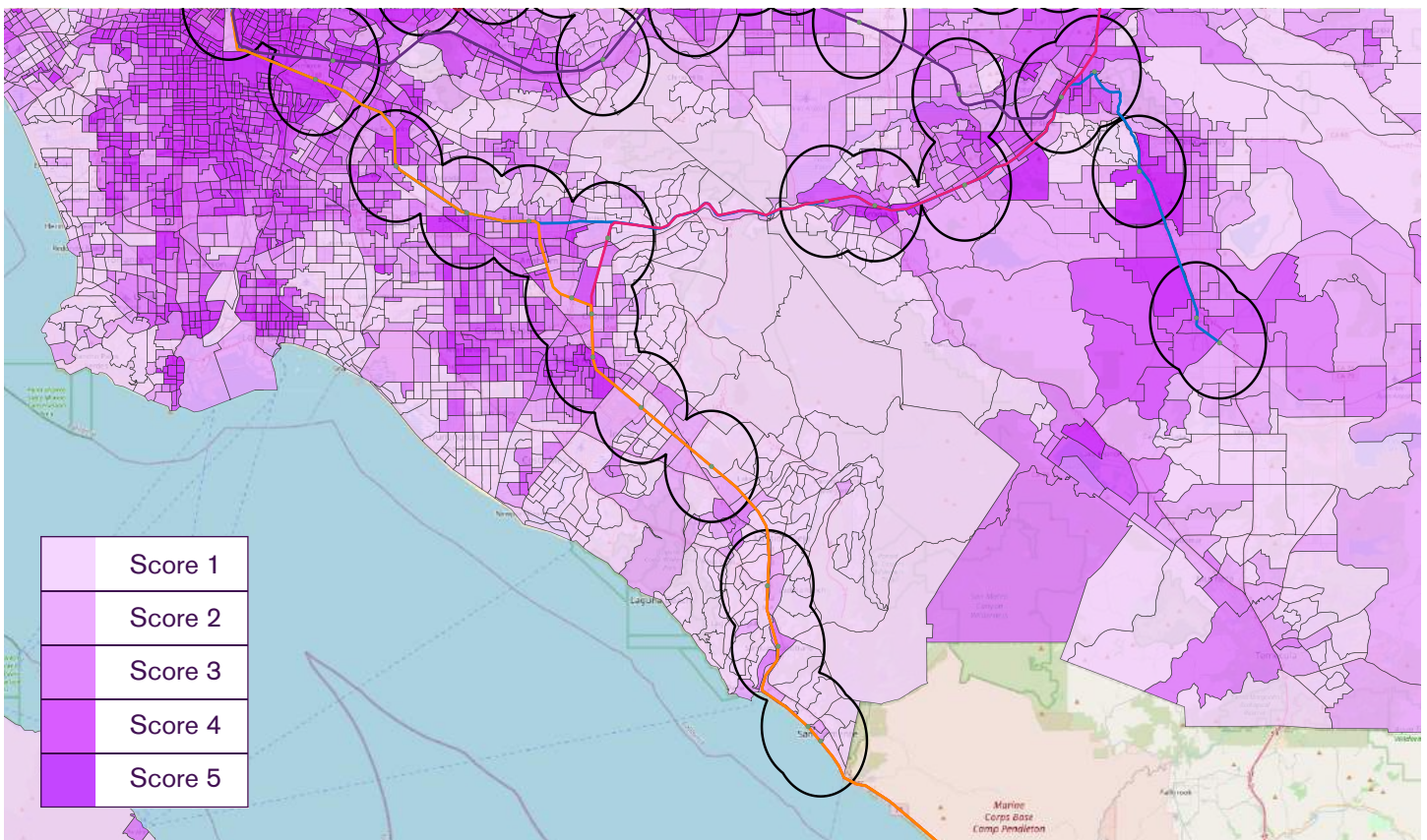
Ventura County

While inner Ventura County consists primarily of lower-scoring census tracts, the outer county, including the cities of Ventura, Oxnard, and Camarillo contain some higher-scoring areas.

	Score 1
	Score 2
	Score 3
	Score 4
	Score 5
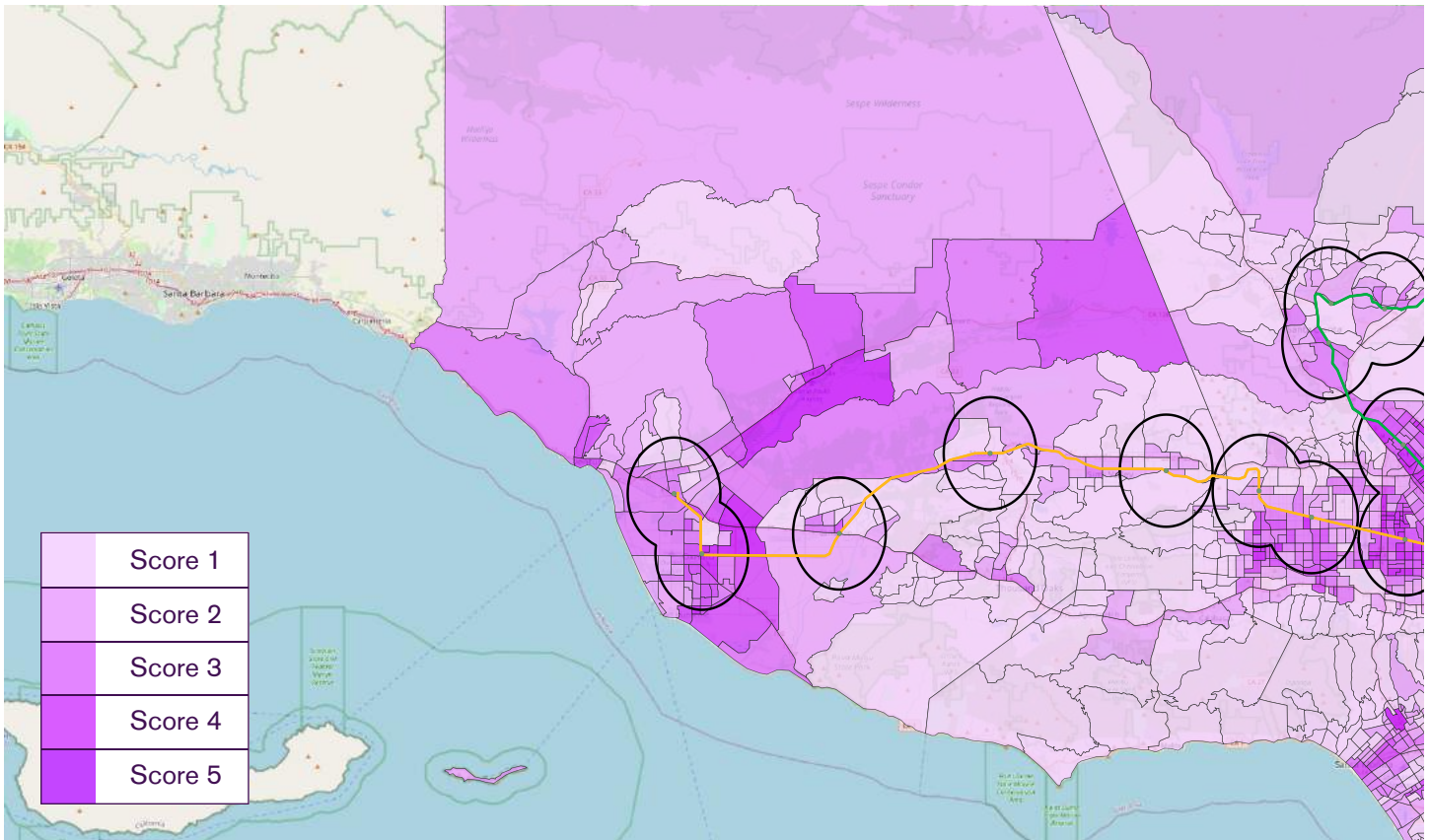
ENDNOTES

1   Metrolink Business Recovery Framework, approved September 2020.

2   Throughout this report, the term 'social equity communities,' will be used as a collective reference to U.S. populations and communities who have historically been marginalized and negatively impacted by inequitable policies. Today these same communities face resource and health disparities and disadvantages because of past and continuing systemic racial discrimination and economic exclusion. These communities include non-white populations, low-income households and people living in poverty, unhoused residents, undocumented immigrants, linguistically isolated communities, and people living with disabilities.

3   Transit Center, 44

4   Additionally, this map does not normalize for household size, which may vary somewhat within the Southern California region. A larger household with the same income as a smaller household would have a different experience. Given that the individual layers contained within this Atlas are intended to provide a characteristic impression, the non-normalized household unit was determined to be appropriate.

5   The ACS does not provide median household income data for tracts with a median household income greater than $250,000 annually. For the purposes of this Atlas, this limitation means that tracts with greater than a $250,000 median income are represented as having a median annual income of $250,000. This upper bound is an artificial limit and does not actually represent the actual highest median income which might be otherwise observed within Southern California.[6] Because the median rent paid and median household income for renters are not linked metrics in Census Bureau data, for a small number of census tracts - primarily with very low populations - the median rent payment actually is greater than the median household income.

6   Because the median rent paid and median household income for renters are not linked metrics in Census Bureau data, for a small number of census tracts - primarily with very low populations - the median rent payment actually is greater than the median household income.