



# City Manager's Office

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## MEMORANDUM

**DATE:** January 10, 2024

**TO:** Mayor and City Council

**THROUGH:** Doug Thornley, City Manager Approved Electronically

**FROM:** Suzanne Groneman, Sustainability Manager  
Jackie Bryant, Assistant City Manager

**SUBJECT:** United States Department of Agriculture Forest Service for the Inflation Reduction Act-Urban & Community Forestry City of Reno Program

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The USDA Forest Service awarded the City of Reno \$500,000 under the Inflation Reduction Act for the purpose of a large tree planting project. The Reno City Council may accept the grant on the January 17, 2023. This project has two primary components:

1. Reimagine Airway Drive from Neil Road to Longley Lane through some removal of existing material and planting of trees utilizing existing irrigation; and
2. Utilize the City of Reno greenhouse, shadehouse, and tree yard (collectively “greenhouse”) to produce and grow trees to support the project. The area is an approximately one-mile stretch of road between the Reno-Tahoe International Airport and homes and businesses.

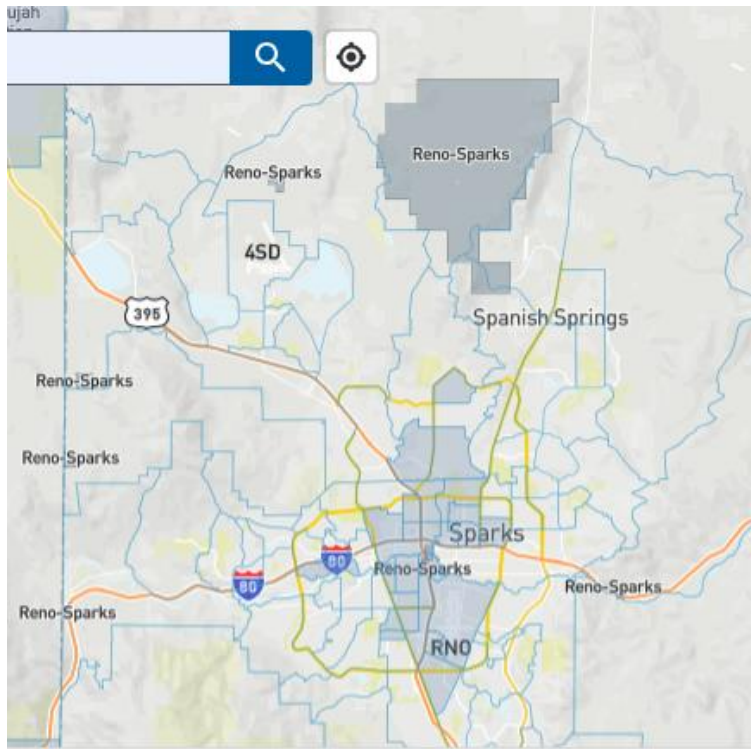
Staff selected this location as a highly competitive application option, because:

1. It did not require matching funds; and
2. It is in an area with high energy burden and high urban heat index.

### Match Requirements

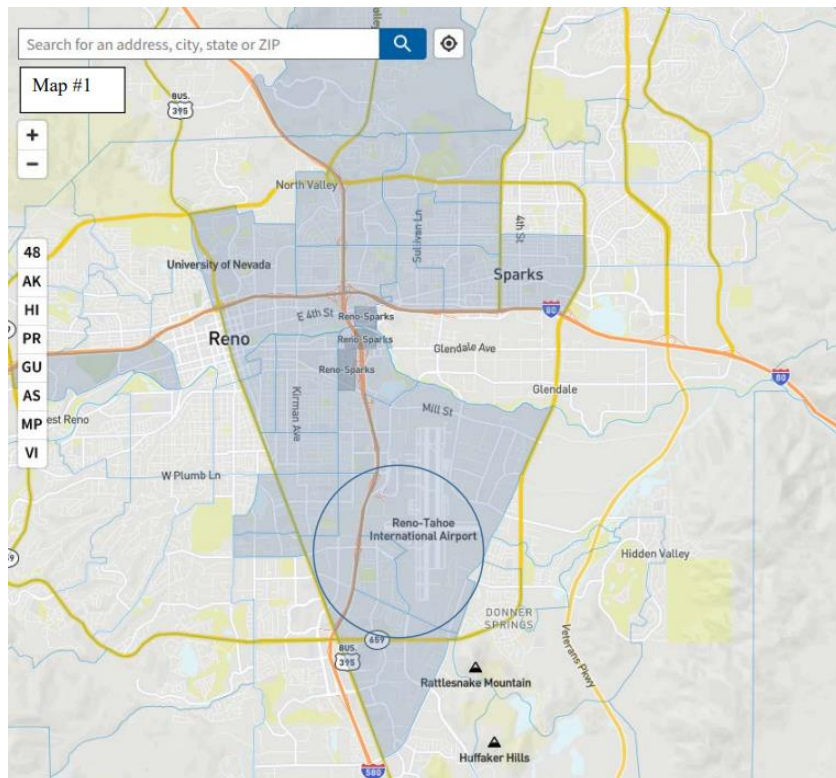
Under the grant, if the project lies within a disadvantaged community in its entirety, the applicant can apply for a match waiver. Otherwise, the match is required dollar for dollar. This grant uses the federal government Climate and Economic Justice Screening Tool (CEJST) to determine match requirements. Figure 1 below shows a screenshot of the disadvantaged communities in our region using the CEJST tool. The interactive tool is available at [screeningtool.geoplatform.gov/en/](https://screeningtool.geoplatform.gov/en/).

Figure 1



Because \$250,000 in grant matching funds are not currently budgeted, staff looked for locations that were completely within disadvantaged community areas. The project location is circled below in Figure 2 and is fully within a disadvantaged community. The City requested and received a match waiver based on this location. If the City had not received the waiver, the federal government would have funded \$250,000 and the City would need to contribute \$250,000.

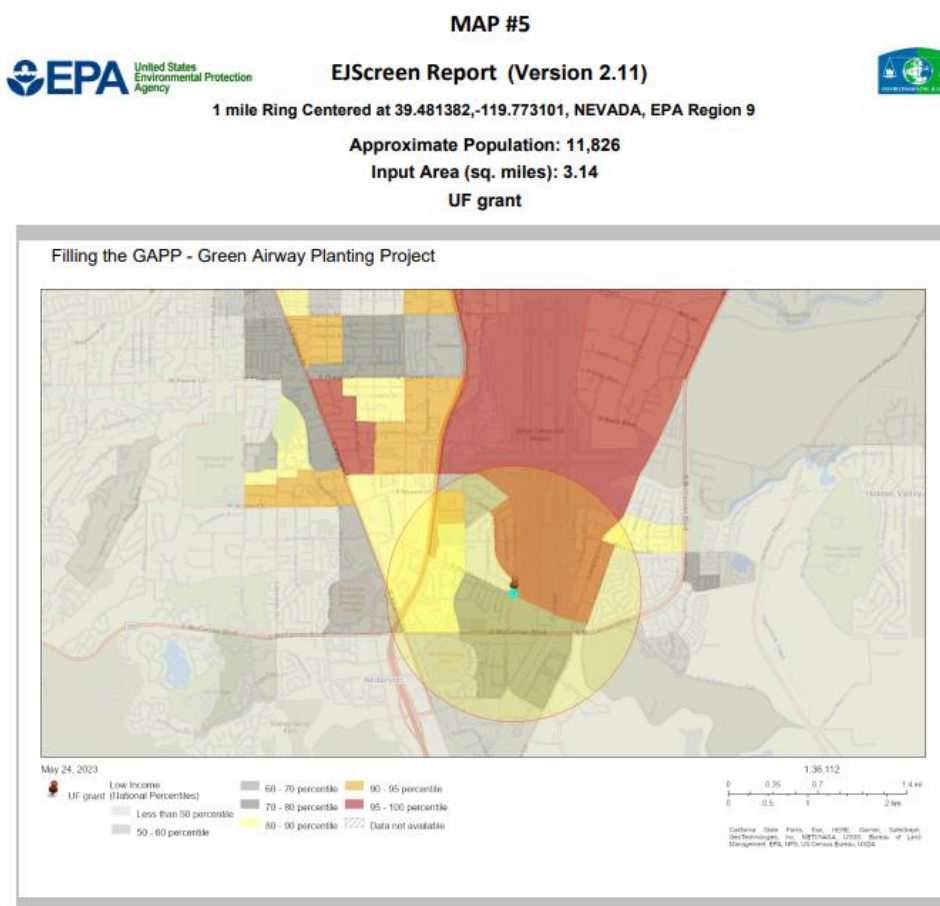
Figure 2



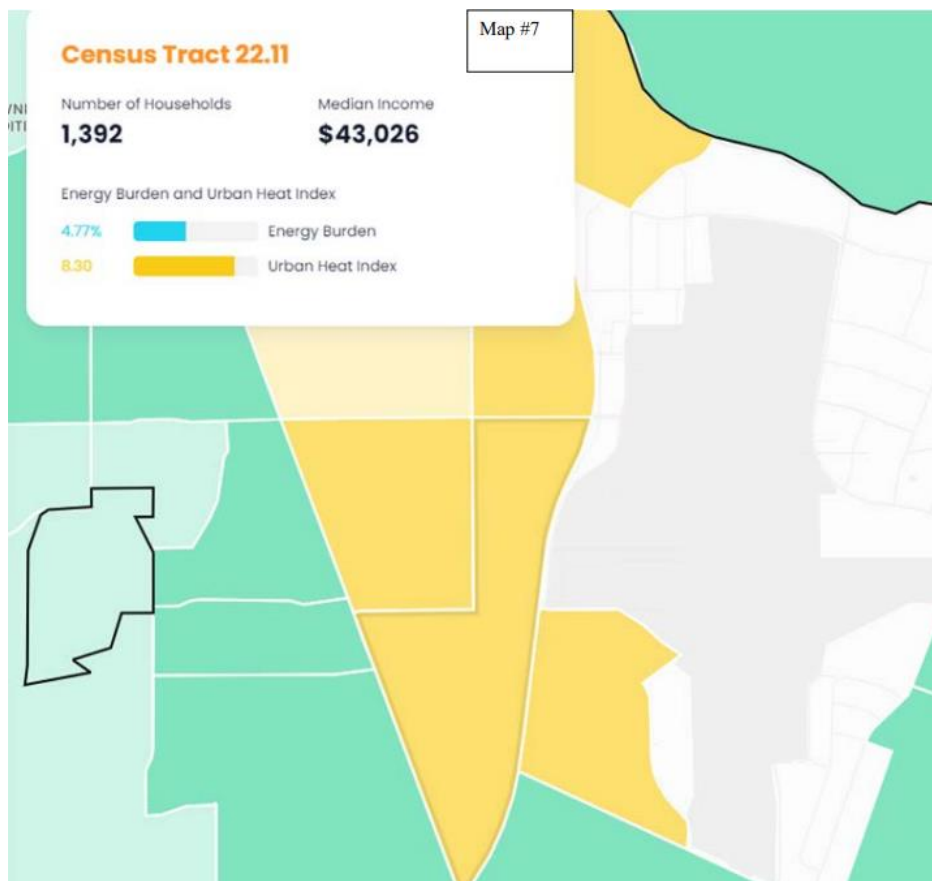
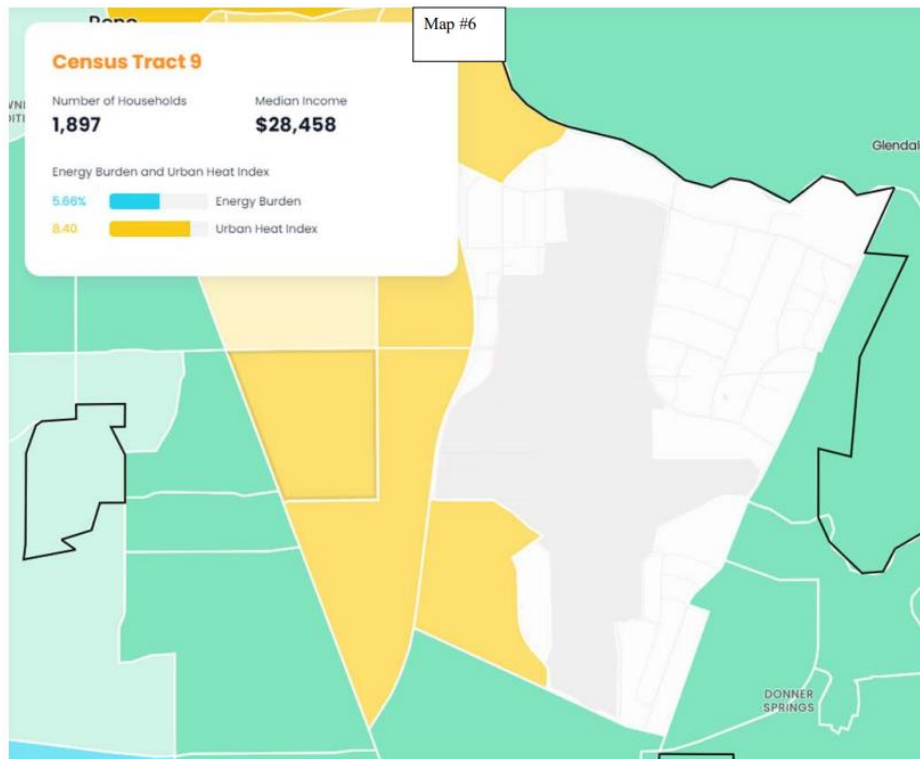
## Areas with Highest Need

Ultimately, the federal government offered funding to less than half of the applicants. As a highly competitive federal grant and in an effort to create a highly competitive application for the funds, the City used two additional tools to qualify the project area to in effort to strengthen the application and waiver request and to demonstrate need.

Environmental Protection Agency EJ Screen Demographic Index: <https://www.epa.gov/ejscreen>. (Map #5)  
Within this one-mile ring of this project area, there is an approximate population of 11,826 people. The project area is in the 90th-100th percentile for ozone. Ozone can damage the tissue of the respiratory system, causing symptoms such as coughing, chest tightness, and worsening asthma. Neighborhoods with tree canopy can experience reduced rates of asthma and other respiratory illness by 20-30 percent. Forty-seven percent of households within a one-mile radius of the project area are considered low income, compared to the state average of 32 percent and the national average of 30 percent.

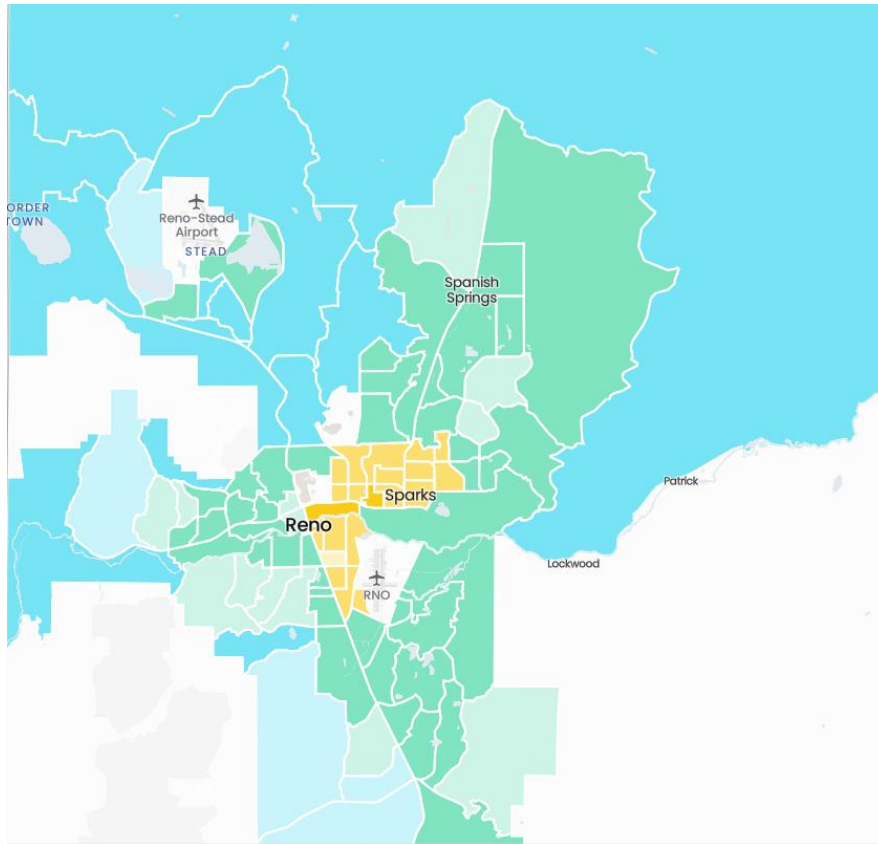


The City subscribes to the Greenlink Equity Map available at <https://www.equitymap.org>. According to the Greenlink Equity Map tool, (Map #6), 1,897 households near the project area have an urban heat index of 8.4 percent (high) and energy burden of 5.66 percent (moderate to high). Another 1,392 households (Map #7) near the project area have an urban heat index 8.3 percent (high) and energy burden 4.77% (moderate). *Urban heat index* represents the heat differential (increase) in degrees of an area over outlying, less urban, areas.



The Greenlink map (Figure 3) shows all census tracts in Reno using Energy Burden and Urban Heat Index indicators. Other than parts of Sparks, the tracts west and northwest of the Reno-Tahoe International Airport are the highest energy burdened with the highest urban heat indexes. Yellow indicates high burden, blue and green indicates low burden.

Figure 3

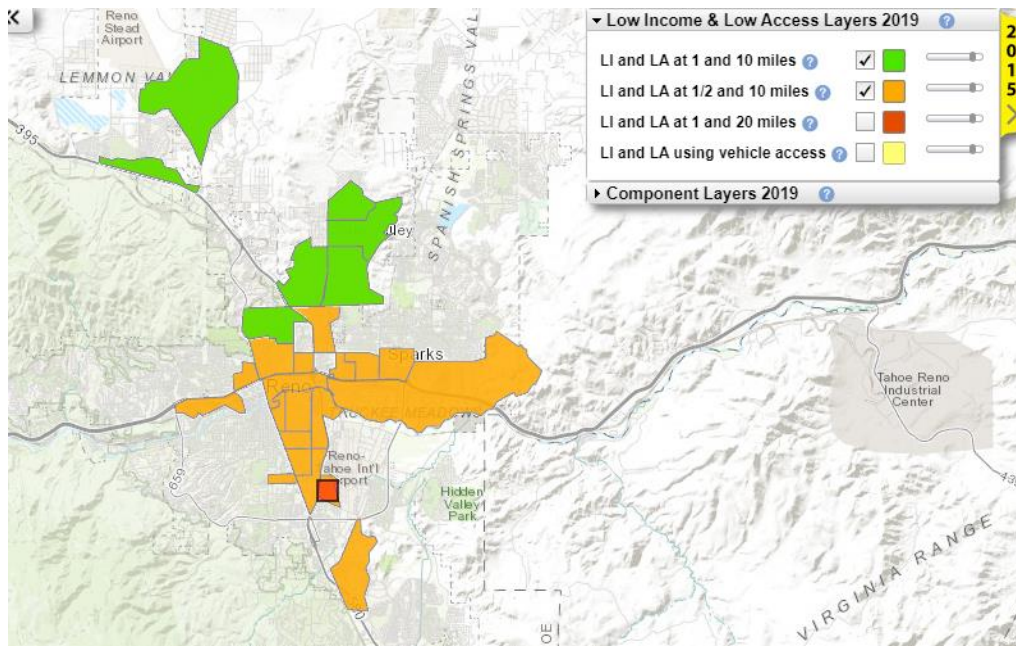


### Previous USDA Grant for Fruit Trees

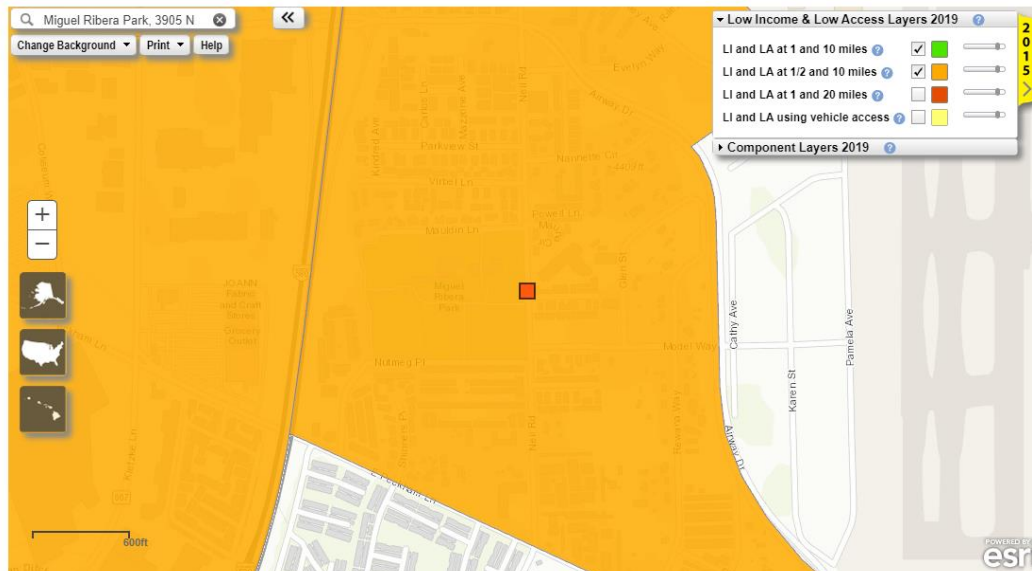
On July 26, 2023, the Reno City Council accepted a sub-grant from Nevada Plants for \$4,000. The acceptance required the funds be used in or near a USDA designated “food desert”. The USDA defines a food desert as low-income census tracts with a substantial number or share of residents with low levels of access to retail outlets selling healthy and affordable foods<sup>1</sup>. Staff used the Food Access Research Atlas located at <https://www.ers.usda.gov/data-products/food-access-research-atlas/go-to-the-atlas/> to determine areas of the City that would qualify for funding (Map #1 below). Further, after discussing with Nevada Plants, staff analyzed neighborhoods that fell within the federal government defined disadvantaged communities (previous Figure 1) as well as areas most burdened by high heat in order to meet the overall goals of the project funding. Staff found Miguel Ribera Park (Map #2 below) to fit the criteria.

<sup>1</sup> <https://www.ers.usda.gov/amber-waves/2011/december/data-feature-mapping-food-deserts-in-the-u-s/>

## Map #1



## Map #2



Areas in green on Map #1 represent low-income tracts that is one or more miles from a grocery store. Areas in orange on Maps #1 and #2 represent tracts that are .5 miles to one mile from a grocery store.<sup>2</sup>

The fruit tree planting at Miguel Ribera Park was the first of its kind in Reno. A second fruit tree project is in process for the North Valleys' Mayor's Park to further expand healthful food options and minimize food deserts.

The City of Reno aligned both of these tree-planting efforts with the strategic plan goal *Infrastructure, Climate Change and Environmental Sustainability*, and *Arts, Parks, and Historical Resources*, as well as the adopted Sustainability and Climate Action Plan. The application for the USDA grant being considered by council on January 17 is attached. The \$4,000 from Nevada Plants was not awarded as a result of a competitive application, rather it was a collaborative project idea funded by the non-profit.

<sup>2</sup> <https://www.ers.usda.gov/data-products/food-access-research-atlas/go-to-the-atlas/>

## PROJECT NARRATIVE

Forest Service (FS) Urban and Community Forestry Program  
Inflation Reduction Act – Urban and Community Forestry  
NoFO Number: USDA-FS-2023-UCF-IRA-01

Title: Filling the GAPP - Green Airway Planting Project

Applicant: City of Reno (City)

**Contact Information:**

Suzanne Groneman, Sustainability Manager

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[gronemans@reno.gov](mailto:gronemans@reno.gov)

**1. Project Scope Alignment:**

For the past several decades, urban and community forests in Nevada have experienced a steady decline in number of trees and overall canopy cover. The west was in a severe drought from 2013 – 2017, and many community trees in Nevada died from lack of adequate water. Communities have not fully mitigated these effects. Some communities are just beginning to replace dead trees. In general, Nevada has experienced a trend of declining tree cover in the urban environment.<sup>1</sup> As the hottest, driest state in the nation, Reno was awarded the unfortunate superlative of fastest warming city in the US with an average temperature increase of nearly 8 degrees Fahrenheit over the last half century (Climate Center, 2022). Using trees as a tool for heat mitigation and quality of life improvement can address many social and environmental issues if implemented effectively, meeting goals of local and national governments, social, and environmental organizations. This program works to address specially the following values from the Forest Action Plan:

- Improving human health and quality of life by installing trees along neighborhoods adjacent to the Reno Airport, buffering the neighborhood from airport influences, providing a better quality of life when walking along the streetscape (Goals 3-2, 3-3, and 3-5).
- Municipal investments improving quality of life and boosting Local Economies through green infrastructure support (NDF priority value of urban forests, p. 135).
- Increasing ecosystems benefits from urban trees (Goal 3-2, “urban ecosystem services” as a primary value at risk, p. 135).
- Improving urban forest maintenance and management (Goal 3-3).
- Increasing public valuation of urban trees through increasing access to trees and greenspace benefits in communities with low tree equity (Goal 3-5).

With current climate trends and increasing urban sprawl, community and urban forests are more important now than ever. In Nevada, the places needing the benefits and services of trees and forests most are often the places where it is the most challenging to grow them. Urban forests play a vital role in addressing biodiversity in several ways. By offering a variety of tree species, understory vegetation, and diverse microhabitats, urban forests create niches for different organisms to thrive, contributing to local biodiversity. This project will promote ecological

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<sup>1</sup> Nevada 2020 Forest, Range, and Watershed Action Plan, page 111

interactions and enhance ecosystem functions (**Ecosystem Services**). Trees and vegetation attract pollinators such as bees and butterflies, facilitating the pollination of plants within the urban environment. This supports the reproduction of plant species and promotes the growth of urban gardens and green spaces. The trees also act as natural filters, absorbing and filtering rainwater, thereby reducing stormwater runoff and improving water quality in urban areas.

*National Ten-Year Urban and Community Forestry Action Plan:*

The project directly addresses the areas of the plan described as “Diversify, Leverage, Increase Funding of Urban and Community Forestry” and “Strengthen Urban and Community Forest Health and Biodiversity for Long-Term Resilience”, and “Integrate Urban and Community Forestry Into all Scales of Planning”. The project fosters increased and equitable access to urban tree canopy and associated human health, environmental, and economic benefits in disadvantaged communities, improved community and urban forest resilience to climate change, extreme heat, forest pests and diseases.

In 2016, Reno developed the Urban Forestry Management Plan. The City has already made progress by integrating the goals and objectives of the Urban Forestry Management Plan into the updated Master Plan. The City adopted its Master Plan in 2017 following a multi-year, community-based effort to prepare the new Master Plan, known as ReImagine Reno. Neighborhoods with poor tree-canopy coverage are denied the benefits trees provide. In the coming years, neighborhoods with younger tree-canopy coverage and those that receive new trees will begin to see the benefits trees provide, benefits that include lower ambient temperatures, increased property values (**Local Economies**), lower rates of childhood asthma, reduced crime, and a better quality of life. Reno’s urban forests are vital to the health and wellbeing of our community. Reno’s urban forest also provides more than \$20 million in annual stormwater and air pollution benefits.

The City of Reno also adopted its first Sustainability & Climate Action Plan in July 2019. Under Priority 6, *Healthy, Equitable, Urban Forest*, the City set forth a goal to increase its canopy to 10% by 2036, with a 100% fair distribution of trees by 2040. Further, the City aims to reduce community-wide greenhouse gas emissions 40% by 2030 from 2008 levels. Under this Plan, and to reach the citywide goals, the City must increase tree canopy coverage and ensure its targeting areas with inequitable coverage. A strong correlation also exists between socio-economic factors and canopy coverage—higher-income neighborhoods have significantly higher canopy coverage.

*Justice 40:* The entire work area is identified by the Climate and Economic Justice Screening Tool (CEJST) as “disadvantaged” due to a variety of factors, including low income, meeting Justice 40 goals of prioritizing disadvantaged communities (Map #1). The project can affect energy-burdened households by reducing heat. Expanding urban forests addresses the principles of Justice40 by addressing environmental and economic disparities in our community. Urban forests contribute to addressing climate injustice by mitigating the UHI by providing shade. Tree-planting and preservation combats climate change and ensures equitable resilient environments (**Urban Livability**). Urban forests are a critical social justice issue. When equitably distributed, access to green spaces can promoting community well-being (**Human Health**, mental and physical). This project will create green space for an area with high



recreational potential, featuring broad sidewalks, connectivity, and bike lanes. The site is currently accessible but underutilized due to the long stretch with no shade rendering the area essentially unusable in the hot summer months.

## **2. Implementation Strategy/Methodology/Timeline:**

The implementation strategy is outlined as Goals and Objectives, Project Scope and Timeline, Site Selection and Assessment, Tree Species Selection, and Monitoring and Evaluation.

### Goals and Objectives

This project will utilize the City of Reno Greenhouse, shadehouse and tree yard (Collectively “Greenhouse”) to produce enough trees to reimagine the landscape in the proposed project area. The area is an approximately one-mile long stretch of road between the Reno-Tahoe International Airport and homes and businesses. Species will be grown which are suitable for the difficult site (high pH, high salinity, and drought tolerant) and climate resilient. Tree procurement has been a challenge for southwest states due to the lack of local nurseries that identify and produce species suitable for the Reno area, localized production of regionally adapted and acclimated species is increasingly valuable, and can provide an assurance of investment through improved establishment rates, fewer replacements needed, faster growth rates, and control over the quality of the plant stock (meeting ANSI standards for above and belowground material).

### Project Scope and Timeline

Tree Propagation: The tree-growing portion of the project is located at the City of Reno Greenhouse, which is approximately four miles from the planting site. The planting site is in the 89502 Reno zip code. The tree-growing site borders a disadvantaged community, and this program will produce trees exclusively intended for communities identified as disadvantaged by the CEJST. Under this project the City will a) grow 200 trees to meet the demand needed for the project site (overproducing to ensure sufficient production); and b) plant 132 of the trees along Airway Drive, near the Reno-Tahoe International Airport.

The growing supplies will be used to propagate the project trees from seeds, cuttings, and liners. Trees will be grown out at the City nursery, as they are not available in the desired species in appropriate sizes and quality through vendors. A mist system with heat mats will be used to produce trees from cuttings, to asexually propagate trees from selected specimens in our city parks. We will utilize containers from seedling to 10 gallon size. The shade structure at the Greenhouse does not currently have shade cloth and is covered in vining weeds. The weeds will be removed and shade cloth installed on the structure. In addition, drainage in the shadehouse is poor and promotes soil borne pathogens and roots growing into the ground. A French drain and weed barrier cloth will alleviate these issues.

### Tree Species Selection:

Trees will be propagated from seed, cuttings, and liners by the City of Reno Horticulturist. Selection will include factors such as soil type the species will thrive in, sun exposure, wind exposure, height (lower heights are needed near the runway approach), and prey attraction. The City of Reno will avoid the trees on the Unacceptable List provided by the RTAA. Acceptable

and planned species will be drought tolerant and provide shade, but are lower in height. For example, elm trees which are already common in the area.

Site Selection and Assessment (methodology)

The proposed site for planting includes the center median of Airway Drive, as well as along the sidewalks areas and other open space adjacent to the street. The City of Reno owns land and buildings known as the Greenhouse (Maps #3 and #4). This location is not in a disadvantaged area, but sits directly across the street from a Justice 40 designated community.

Due to the proximity to the Airport, site selection has taken place and was initially reviewed by the Airport Planning Manager. Trees that attract large birds of prey are not allowed, including fruit and nut trees. An initial planting plan shows 132 trees along Airway Drive (Map #2). The City currently has irrigation and drainage systems along the planting site. This area is important because of the pollution created by the airplanes, as well as heat generated by the runways. Both of these impact the surrounding community in negative ways.

Monitoring and Evaluation

Trees will be monitored periodically for survival, growth rates, and condition. Additionally, evaluating the project's success will include assessing the ecological benefits provided by the trees, such as air quality improvement, carbon sequestration, and habitat enhancement. The City will use the iTree or other available tool to analyze these benefits. Community feedback and engagement will be solicited to gauge satisfaction and assess the project's social impact. By collecting and analyzing data on these aspects, the effectiveness can be evaluated, lessons can be learned for future projects, and necessary adjustments can be made to ensure the sustained success of the tree planting efforts. The evaluation of the success of the Greenhouse project will be evaluated by the overall success of the tree-growing portion of the project.

<p><u>Year 1</u> <u>(2023/2024)</u></p>	<p>Convene project teams. Design scope of work for contractor. Design and purchase greenhouse improvements. Design tree layout at planting site. Seek necessary City approvals for the grant. Evaluate existing tree inventory against the planned site. Engage with the Airport Authority regarding a draft planting plan. Provide updates to the Airport Authority Sustainability Committee. Purchase liners (baby trees). Irrigation design at planting site.</p>
<p><u>Year 2</u> <u>(2025)</u></p>	<p>Remove 2,200 cubic yards of existing material. Deliver soil. Perform final Greenhouse improvements. Create a project plan for community feedback and design communication strategy. Determine the date to begin planting. Provide updates to the Airport Authority Sustainability Committee. Refine planting maps. Hold contractor kick off calls for site work. Initial tree planting (seasonal). Irrigation upgrades.</p>
<p><u>Year 3</u> <u>(2026)</u></p>	<p>Tree planting (seasonal). Prior year planting tree inspection. Provide updates to the Airport Authority Sustainability Committee. Create project site signage explaining the source of funds and benefits to the community. Refine Project Plan.</p>

<u>Year 4</u> <u>(2027)</u>	Tree planting (seasonal). Prior year planting tree inspection. Provide updates to the Airport Authority Sustainability Committee. Perform a community survey. Project closeout and final reporting.
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**3. Capability and Capacity:**

Urban Forester, City of Reno

Matt Basile

Role:

- Project Manager (tree site preparation)
- Manage contractors (site preparation and tree-planting)
- Create and review tree specifications and designs
- Ensure compliance with partners, collaborators, and contractors

Qualifications:

- B.S. Natural Resources Management
- Certified Arborist - International Society of Arboriculture
- Twelve years urban forestry and management experience

Bio:

Prior to joining the City of Reno in 2017, Mr. Basile was the arborist for Evanston, Illinois. His experience includes tree maintenance and preservation, City site management, and crew management. He is the Staff Liaison for the Urban Forestry Commission. Ms. Basile has presented on soil and tree health, root care, and other subjects at many conferences and other convenings.

Horticulturist, City of Reno

Ryan Sharrer

Role:

- Propagation of trees (the process of creating new plants)
- Plant health management
- Transplanting trees from growing site to plating site
- Oversee greenhouse upgrades

Qualifications:

- B.S. Biological Systems Engineering, B.S. Biology
- Certified Arborist WE-13808A
- 17 years of plant nursery and propagation experience, including 8 years as a Nevada Division of Forestry Nursery Specialist III

Bio:

Mr. Sharrer previously worked as the Washoe State Nursery Manager. Prior to that, he was a full-time ecologist at Otis Bay Ecological Consultants. In his experience, he has produced up to 250,000 container plants annually from 150 species. He was responsible for all aspects of greenhouse nursery production including crop schedules; seed collection, storage, and germination treatments; custom fertilizer development and application; insect and disease scouting and treatment following IPM; water quality monitoring, and facilities maintenance.

Sustainability Manager, City of Reno  
Suzanne Groneman

Role:

- Grant management and reporting
- Project tracking
- Communications with team members and community partners

Qualifications:

- B.S. Business Management and Political Science
- Graduate Certificate in Energy Technologies & Innovation
- Professional Certificate, Green Pro Commercial Buildings Operations & Maintenance
- 11 years sustainability and energy experience; 12 years land development experience

Bio:

Ms. Groneman's objectives include planning and drafting of green building policies, identification of retrofit projects, seeking and managing grants, and implementing several operational changes under the City *Lead by Example* motto. Ms. Groneman organized the City's LEED Gold certification effort in 2022. She sits on the Board of Directors for ImpactNV. She also sits on several advisory committees, including the RTAA, Airport Sustainability Advisory Committee.

#### External Partner

Lissa Butterfield/Staff

Reno-Tahoe Airport Authority (RTAA)/Airport Sustainability Advisory Committee

The RTAA firmly believes that a healthy and natural environment plays a crucial role in the quality of life for our surrounding communities. Ms. Butterfield will ensure the tree locations and types meet federal aviation guidelines. She will provide City Staff with maps and details regarding planting locations and airport expansion efforts. Ms. Butterfield is the Manager, Planning and Environmental Services for the Airport Authority and has been for five years. The Sustainability Advisory Committee will receive periodic updates from City Staff at their quarterly meetings.

#### **4. Communications Plan:**

The City of Reno's Communications Department would take the lead in informing and educating the community about the funding by implementing integrative strategic communications strategies. This would include tactics such as posting information on the City's social media platforms (Facebook- 35K followers, Twitter- 61K followers, Instagram- 24.1K followers, and Nextdoor), creating video and blog content, sending an eNewsletter to the City's 31.7K email contacts, and working with local and regional media partners to help raise awareness for the project, while also highlighting funding source. Examples of press outreach may include press releases, media advisories for project milestones, and ongoing story pitches. See a link to the City's newsroom.

The City of Reno must post on public and private property for new development activities. Signs can be ordered from contracted vendors, or made at the in-house sign shop. The City of Reno has a dedicated, full-time staff member to make street signs, building signs, automobile wraps and decals, and more. It will be important to communicate with the surrounding community by way

of signage. Signage will include project history, benefits, funding partners, as well as other ways to engage the community such as way-funding or other interactive efforts.

**5. Evidence of Disadvantaged Community Status for projects requesting Match Waiver (if applicable):**

Trees provide numerous benefits to disadvantaged communities and play a crucial role in enhancing overall well-being. Trees contribute to improved air quality by absorbing harmful pollutants and releasing oxygen, creating healthier environments for residents. This is significant in underserved areas that suffer from higher pollution levels.

EJ Screen Demographic Index

EJScreen Report (Version 2.11); 1 mile Ring Centered at 39.481382,-119.773101; NEVADA, EPA Region 9; Approximate Population: 11,826; Input Area (sq. miles): 3.14. According to the EJ Screen tool, the project area is in the 90th-100th percentile for ozone (Map #5). Ozone can damage the tissue of the respiratory system, causing symptoms such as coughing, chest tightness, and worsening asthma. Neighborhoods with tree canopy can experience reduced rates of asthma and other respiratory illness by 20-30%.

47% of households within a one-mile radius of the project area are considered low income, compared to the state average of 32% and the national average of 30%. 72% of residents are People of Color, compared to 52% state average and 40% national average.

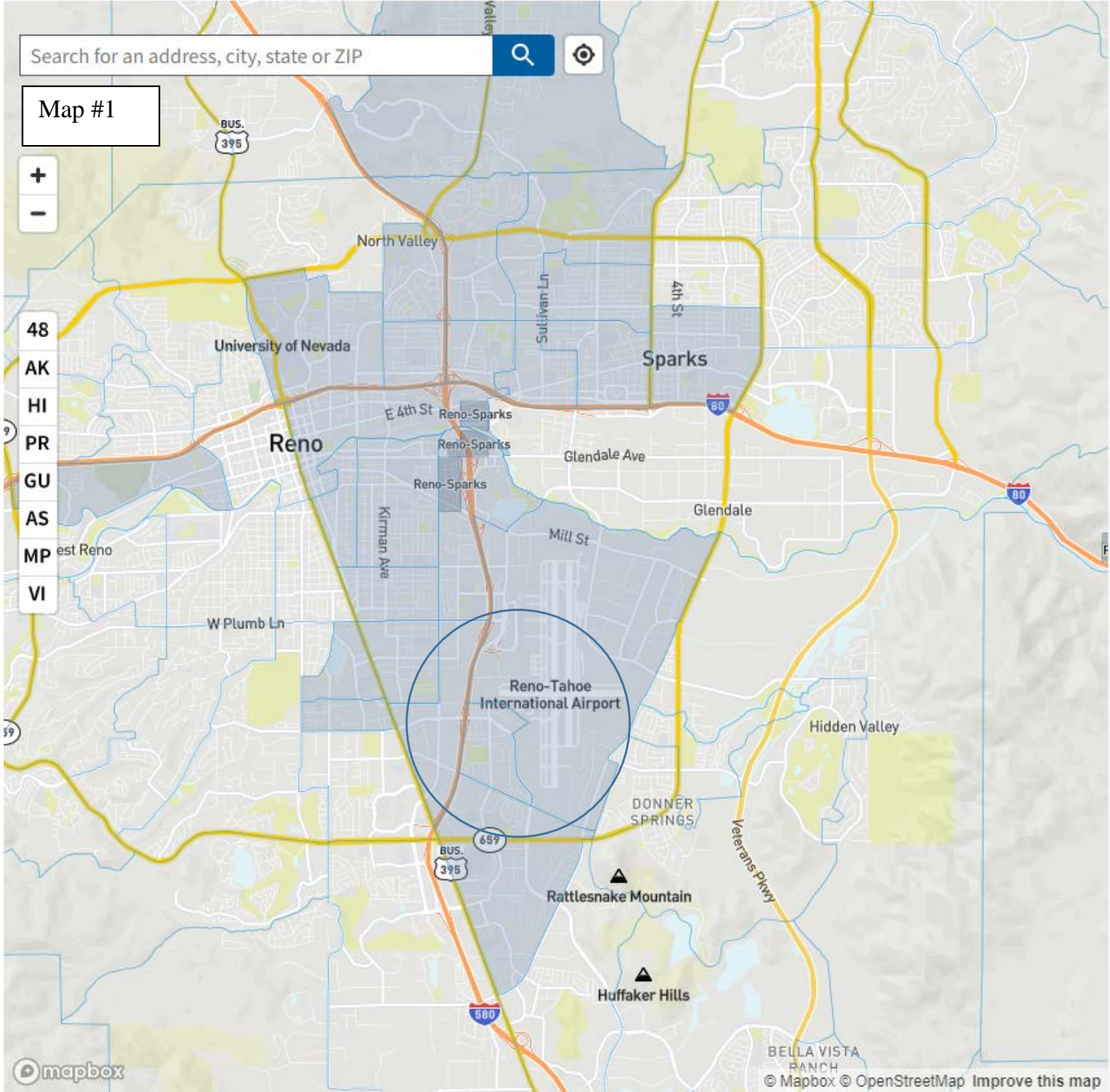
Greenlink Equity Map

The City subscribes to an Equity Map through Greenlink. According to the Greenlink Equity Map tool, (Map #6) 1,897 households near the project area have a Urban Heat Index of 8.4% (high) and Energy Burden of 5.66% (moderate to high). Another 1,392 households (Map #7) near the project area have a Urban Heat Index 8.3% (high) and Energy Burden 4.77% (moderate).

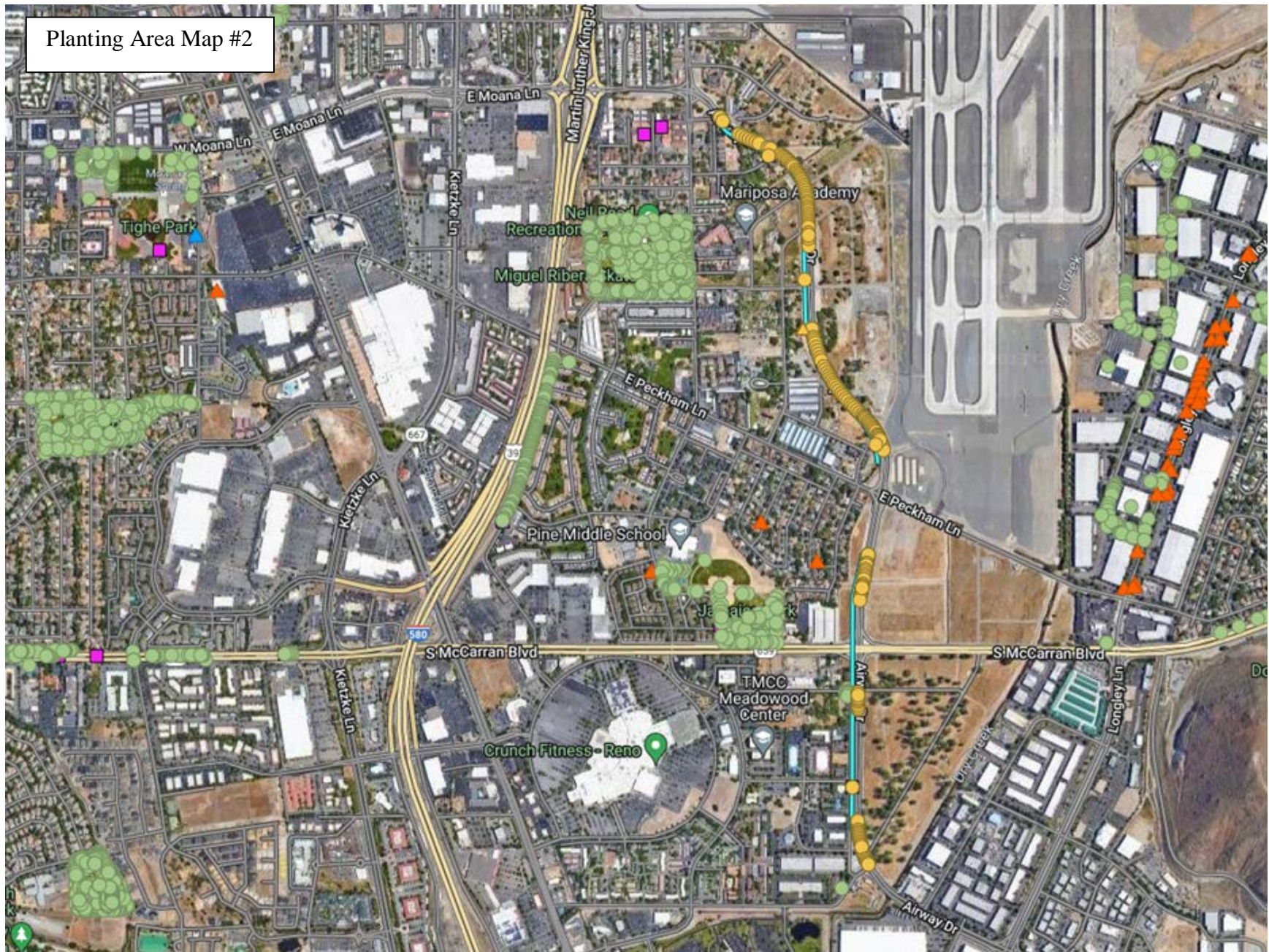
CEJST (Justice 40)

The Greenhouse is directly across the street from a Justice 40 designated community (Map #1). However, the entire planting portion of the project, and the benefitting community is in a Justice 40 designated disadvantaged community.

Filling the GAPP - Green Airway Planting Project



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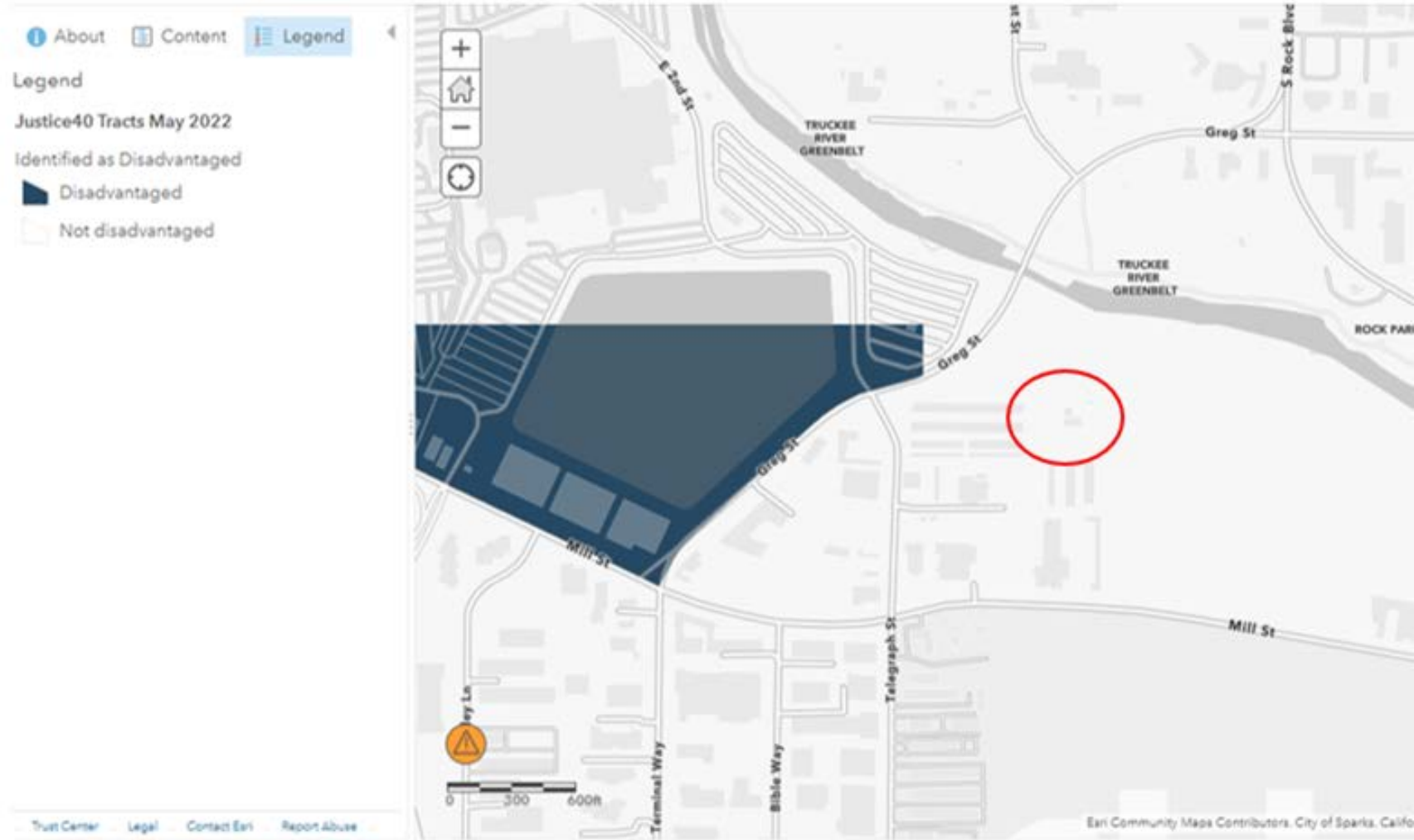
Greenhouse Map #3





Greenhouse Map #4

Filling the GAPP - Green Airway Planting Project



# MAP #5



## EJScreen Report (Version 2.11)



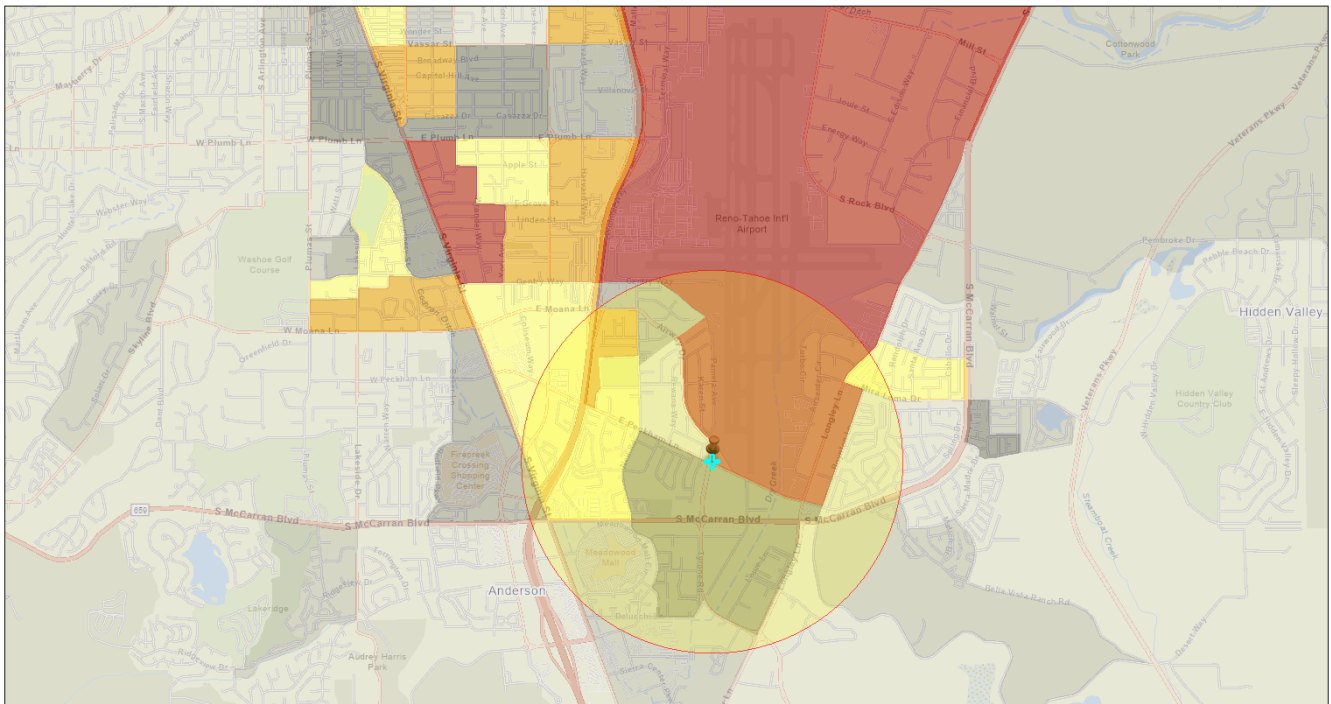
1 mile Ring Centered at 39.481382,-119.773101, NEVADA, EPA Region 9

Approximate Population: 11,826

Input Area (sq. miles): 3.14

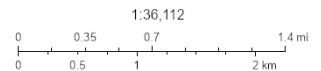
UF grant

### Filling the GAPP - Green Airway Planting Project



May 24, 2023

- Low Income
- UF grant (National Percentiles)
- Less than 50 percentile
- 50 - 60 percentile
- 60 - 70 percentile
- 70 - 80 percentile
- 80 - 90 percentile
- 90 - 95 percentile
- 95 - 100 percentile
- Data not available



California State Parks, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc. METINASA, USGS, Bureau of Land Management, EPA, NPS, US Census Bureau, USDA

Sites reporting to EPA	
Superfund NPL	0
Hazardous Waste Treatment, Storage, and Disposal Facilities (TSDF)	0

Filling the GAPP - Green Airway Planting Project


Map #6

**Census Tract 9**

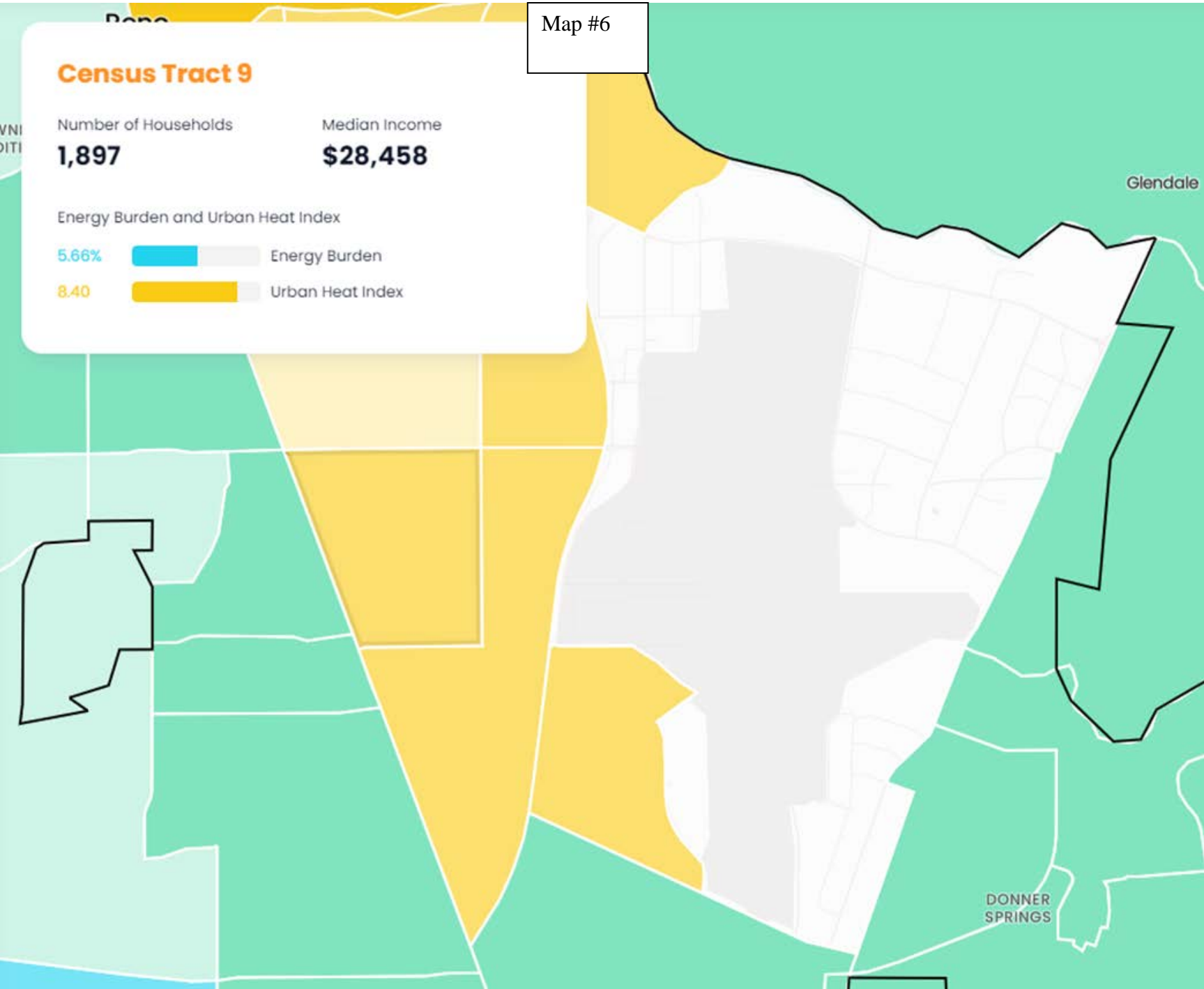
Number of Households  
**1,897**

Median Income  
**\$28,458**

Energy Burden and Urban Heat Index

5.66%  Energy Burden

8.40  Urban Heat Index



Filling the GAPP - Green Airway Planting Project


Map #7

### Census Tract 22.11

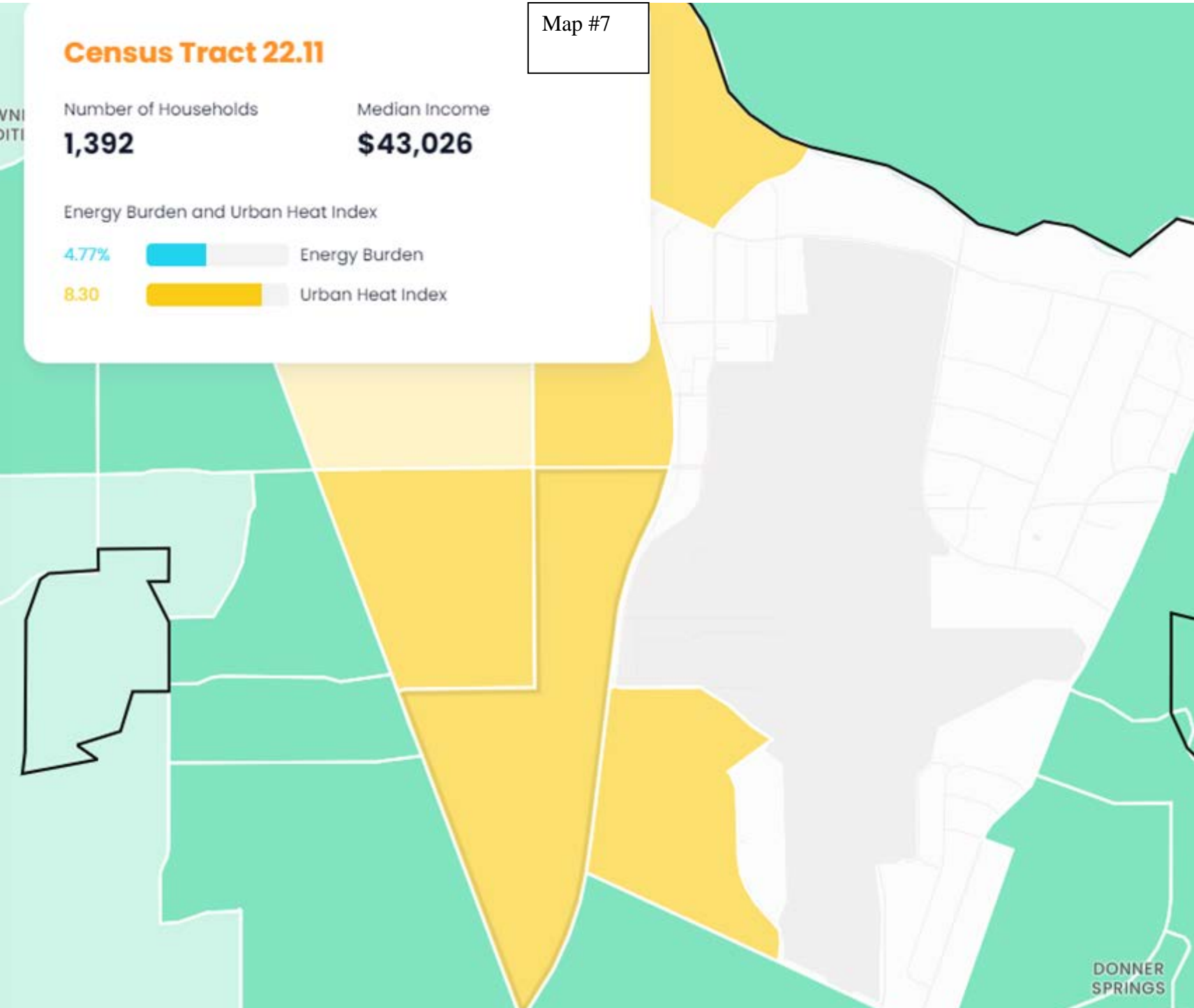
Number of Households  
**1,392**

Median Income  
**\$43,026**

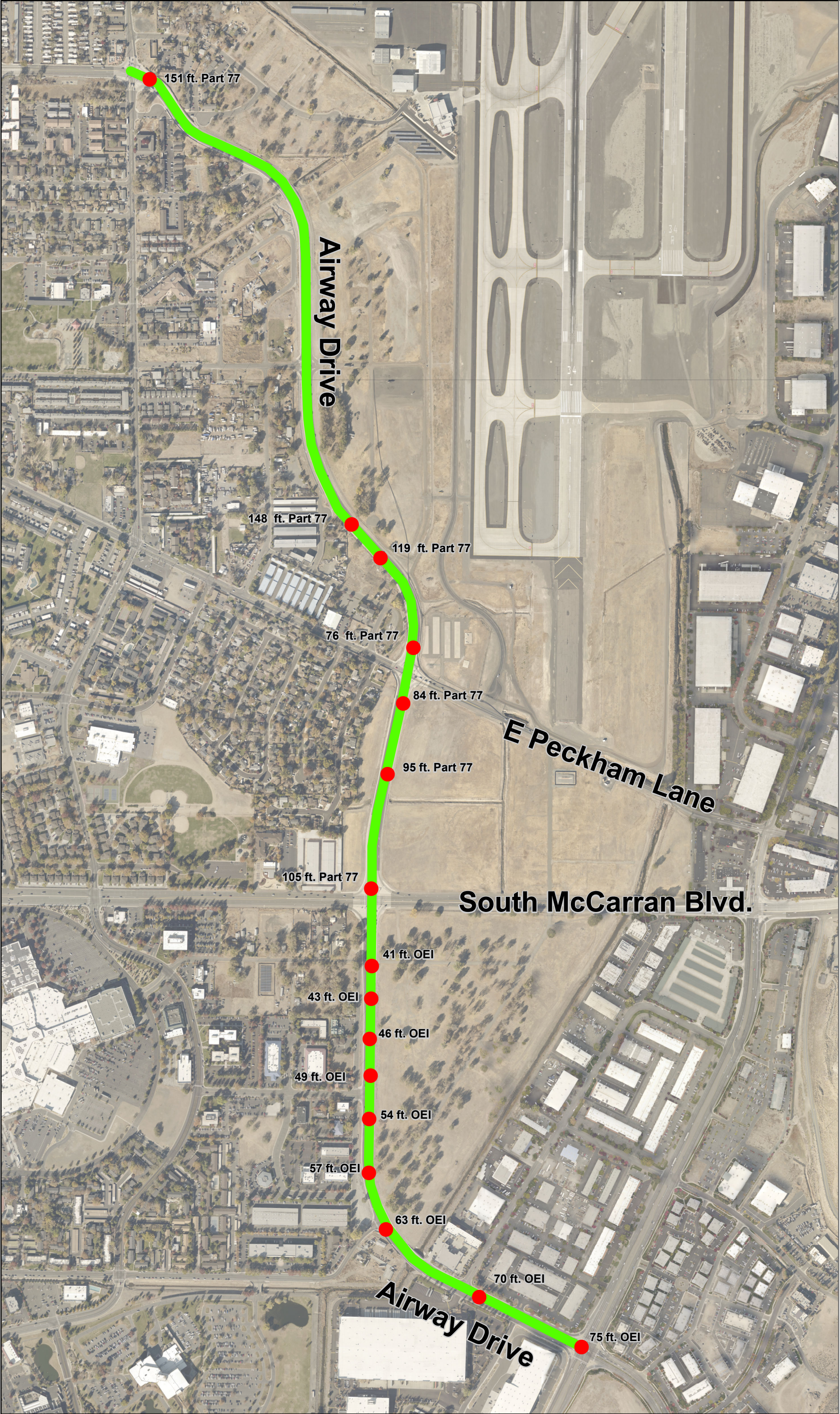
#### Energy Burden and Urban Heat Index

4.77%  Energy Burden

8.30  Urban Heat Index



DONNER SPRINGS



**Reno-Tahoe International Airport (RNO)  
Airway Drive - Airspace Height Limitations**

