



Image Credit: Lance Tyrell



LIVABLE STREETS PROGRAM

SALT LAKE CITY

Prepared for



August 3, 2021

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EXECUTIVE SUMMARY

Image Credit: Lance Tyrell

The Livable Streets Program aims to implement neighborhood traffic calming in Salt Lake City at a citywide scale. The program uses a data-driven, transparent, and equitable prioritization process to create a plan to implement traffic calming improvements in the areas of Salt Lake City that are most in need. This document covers the program's background, goals, prioritization process, applicable treatments, and program management recommendations.

PROGRAM ORIGINS

Salt Lake City managed a neighborhood traffic calming program that ceased operations more than 15 years ago. In that time, other transportation priorities for the City have come and gone, with multimodal safety, sustainable mobility, and equitable investment in transportation infrastructure being recurring themes through recent administrations. Following sustained calls for a renewed Citywide traffic calming program, City Council allocated funding in 2019 for a traffic calming program study. This report is the culmination of that study.



PROGRAM GOALS

Salt Lake City seeks to improve comfort and livability in all of its neighborhoods. The Livable Streets Program uses a variety of data to determine where measures should be implemented to calm traffic and improve the overall safety, livability, and attractiveness of residential streets in Salt Lake City.

PROGRAM DEVELOPMENT AND OUTCOMES

The Livable Streets Program has identified 403.5 miles of candidate streets on which traffic calming treatments could be implemented through the Livable Streets Program. These streets were separated into 113 distinct zones to provide structure for all phases of implementation: community engagement, design development, and construction. This study prioritized the 113 zones in order to help the City decide where to spend potential traffic calming funds. The zones were prioritized based on factors such as injury crashes, prevailing traffic speeds, access to community assets, and socioeconomic data, including households without cars and households living below the poverty line. This data and prioritization will be periodically refreshed to ensure the areas of Salt Lake City in the greatest need of traffic calming are being invested in sooner rather than later.

The Livable Streets Program also includes an update to the City's Engineering Division-approved set of traffic calming treatments. These treatments were selected based on experience with similar treatments in Salt Lake City, as well as their ability to affect traffic behavior as shown in existing applications. These treatments were compiled in a traffic calming toolkit presented later in this report.

RECOMMENDATIONS

The Livable Streets Program presents a tremendous opportunity to engage with a wide variety of Salt Lake City residents to improve livability everywhere. The program will require ongoing funding, staffing, management, and support from elected and appointed officials.

PROGRAM MANAGEMENT

A successful Livable Streets Program would require at least three dedicated City staff people to manage the program. Duties for staff would include engagement efforts, data collection and analysis, design development, and implementation. Separate staff would be needed to work on quick-build measures and permanent implementation. Depending on annual funding allocations and the scale of potential implementation in a given year, the



program will need a fourth dedicated staff person.

The program relies on a data-driven approach to target areas of Salt Lake City for traffic calming improvements rather than responding to community requests. Therefore, consistent messaging about program goals and adhering to the established prioritization will be critical to success. Allowing for adjustment as the program matures will be essential, but maintaining a consistent approach to how each zone is engaged with and treated will serve the program well.

Beyond engaging with community members in specific areas of the city, early input from and collaboration with partner agencies will allow for successful implementation over the life of the program. Developing prototype designs to be tested by the Utah Transit Authority, Salt Lake City Fire Department, and other municipal agencies to minimize adverse effects to critical operations by partners will further the success and reach of the Livable Streets Program.

COMMUNITY ENGAGEMENT

A core principle of the Livable Streets Program is that comprehensive community engagement applied on a consistent basis will lead to optimal outcomes for the City and residents alike. As with other elements of the program, maintaining flexibility while applying the program's dedicated community engagement handbook on an ongoing basis will allow the program to reach a broad cross-section of communities. The Livable Streets Public Engagement Toolkit is included as an attachment to this report.

ONGOING IMPLEMENTATION AND EVALUATION

The Livable Streets Program's data-driven prioritization process should be updated on a periodic, ongoing basis. New crash data will be available annually, allowing for regular and ongoing evaluation of the performance of previous treatments, and demographic data will be updated every five years through the American Community Survey.

Salt Lake City should collect and compare traffic speeds and volumes before and after each instance of implementation. The City should also engage in ongoing communication with individual communities to provide insight into how specific treatments are performing and offer opportunity for refinements.



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BACKGROUND

Salt Lake City's Transportation Division managed a traffic calming program until approximately 2005. The program succeeded in implementing traffic calming measures; however, the program was set up to respond to requests from community members rather than relying on more objective metrics. This led to a higher concentration of traffic calming being implemented on the east side of the city. The implementation of measures on a street-by-street basis also led to criticism that traffic was merely being pushed onto adjacent streets rather than being successfully slowed.

Crucially, this investment was not uniformly appreciated in communities where it was taking place. The challenge of managing the geographic expansion of the program, combined with regular complaints from residents, led the program to become untenable. The effort required to stay abreast of ongoing requests, manage community engagement procedures, and collect and analyze the traffic data required led to a discontinuation of the program.

RECENT INTEREST

Recently, City Council has received repeated requests for a refreshed traffic calming program in Salt Lake City. The broader transportation goals of multimodal safety and mobility for all have moved beyond major arterials and into neighborhoods around the city. This led to the allocation of funding for the Salt Lake City Transportation Division to explore how a citywide traffic calming program, prioritizing equitable investment across the city, could work.



PROGRAM GOALS

LANCE TYRRELL

Salt Lake City seeks to improve comfort and livability in all of its neighborhoods. The Livable Streets Program relies on a variety of data to determine where measures should be implemented to calm traffic and improve the overall safety, livability, and attractiveness of neighborhood streets in Salt Lake City.

EQUITABLE INVESTMENT

The Livable Streets Program was designed to promote equitable distribution of transportation investment on neighborhood streets in Salt Lake City. This pursuit of equity by investing in parts of Salt Lake City as guided by objective sources is intended to focus investment in parts of Salt Lake City where it is most needed. Equitable investment of transportation spending through the Livable Streets Program relies heavily on a transparent, data-driven process.



DATA DRIVEN PROCESS

At a citywide scale, a neighborhood traffic calming program such as the Livable Streets Program requires a consistent set of metrics for evaluating the need for traffic calming in each neighborhood. By relying on a data-driven process, described in more detail later in this report, the Livable Streets Program is able to directly invest and affect change in parts of Salt Lake City that are most in need.

CONSISTENCY

While aspects of Livable Streets' processes are likely to change as the program matures through rounds or years of implementation, the Program seeks to maintain a consistent approach to prioritizing and implementing projects. In addition to a consistent implementation approach, the Livable Streets Program seeks to employ consistent messaging and communication, centralized within the Salt Lake City Transportation Division to manage community expectations and program outcomes.



PROGRAM DEVELOPMENT

The Livable Streets Program's goal is to improve the comfort and livability of neighborhood streets. Salt Lake City first needed to define which neighborhood streets would be considered candidates for the program. Candidate streets were then broken into 113 implementation zones, or defined geographies in which implementation will occur. Those zones were prioritized based on a variety of data to identify areas of Salt Lake City most in need of immediate investment. A toolkit of traffic calming treatments tailored to Salt Lake City's streets was assembled, as well as a Livable Streets Program-specific community outreach and engagement plan.

CANDIDATE STREETS

The Livable Streets Program identified 403.5 miles of candidate streets throughout Salt Lake City that met the following criteria:

- Have a posted speed limit of 30 mph or less
- Are owned and maintained by Salt Lake City
- Have three or fewer travel lanes
- Are not part of a university campus or contained within a public park
- Are not slated for improvements through any other funded program
- Are adjacent to areas with a residential land use component

Streets used by Utah Transit Authority (UTA) bus routes and designated emergency routes that met the criteria above are considered candidates for the Livable Streets Program. These streets will require additional vetting and approval by both UTA and the Salt Lake City Fire Department during the design and implementation process.

Candidate Streets for the Livable Streets Program are shown in **Figure 1**.



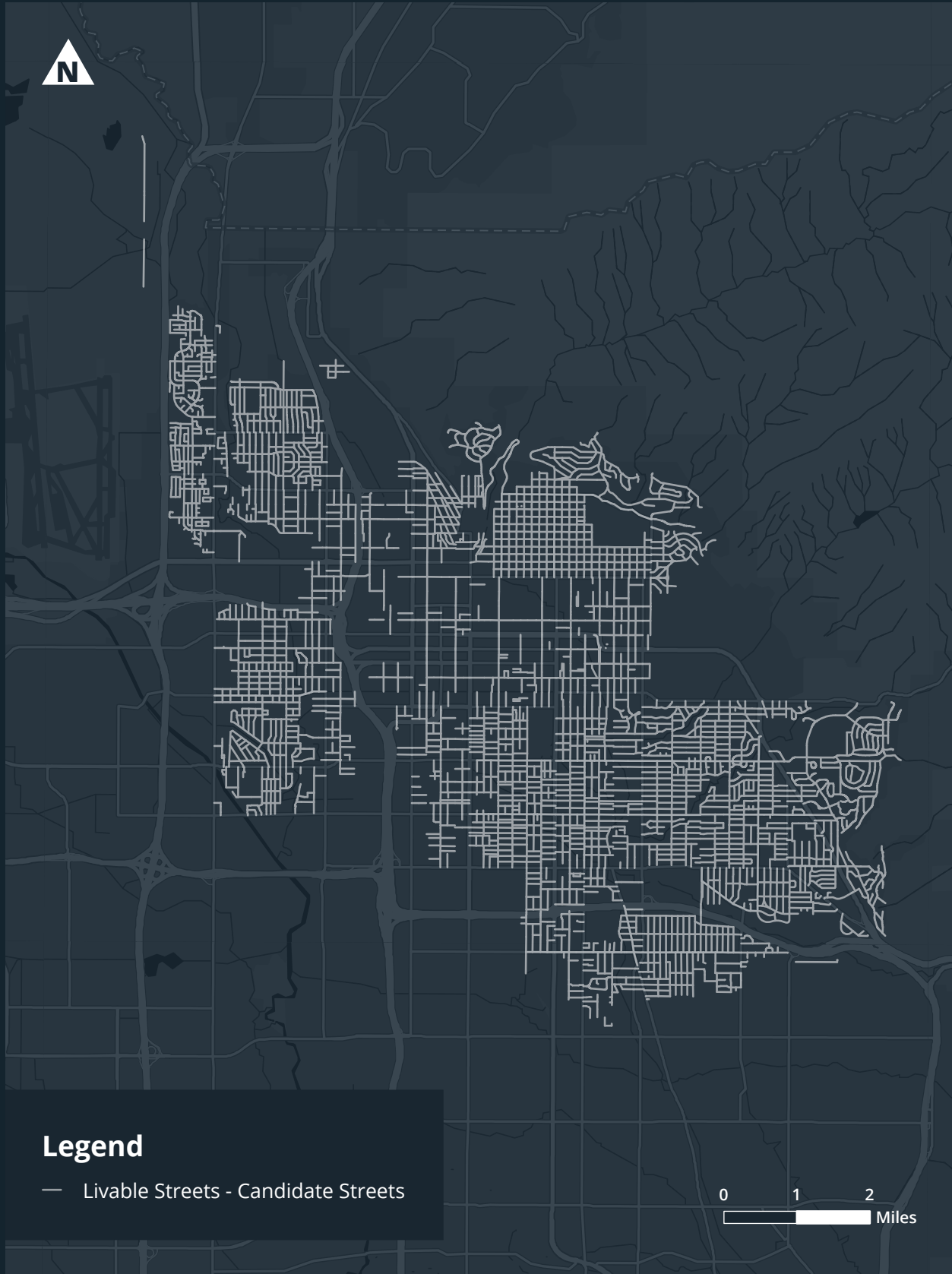


Figure 1: Candidate Streets



ZONE STRUCTURE

In total, 113 zones were created to prioritize implementation of traffic calming on streets therein, and to manage community expectations of when and where traffic calming could be implemented.

Zones, which will be the areas in which outreach and implementation happens, were established based on natural barriers, major streets, and City Council district boundaries. Zones were sized to be roughly similar, though some variation was inevitable. The zone structures were also designed to encourage any diversion of vehicular traffic towards major streets rather than minor, neighborhood streets.

The resulting 113 zones are shown in **Figure 2**.



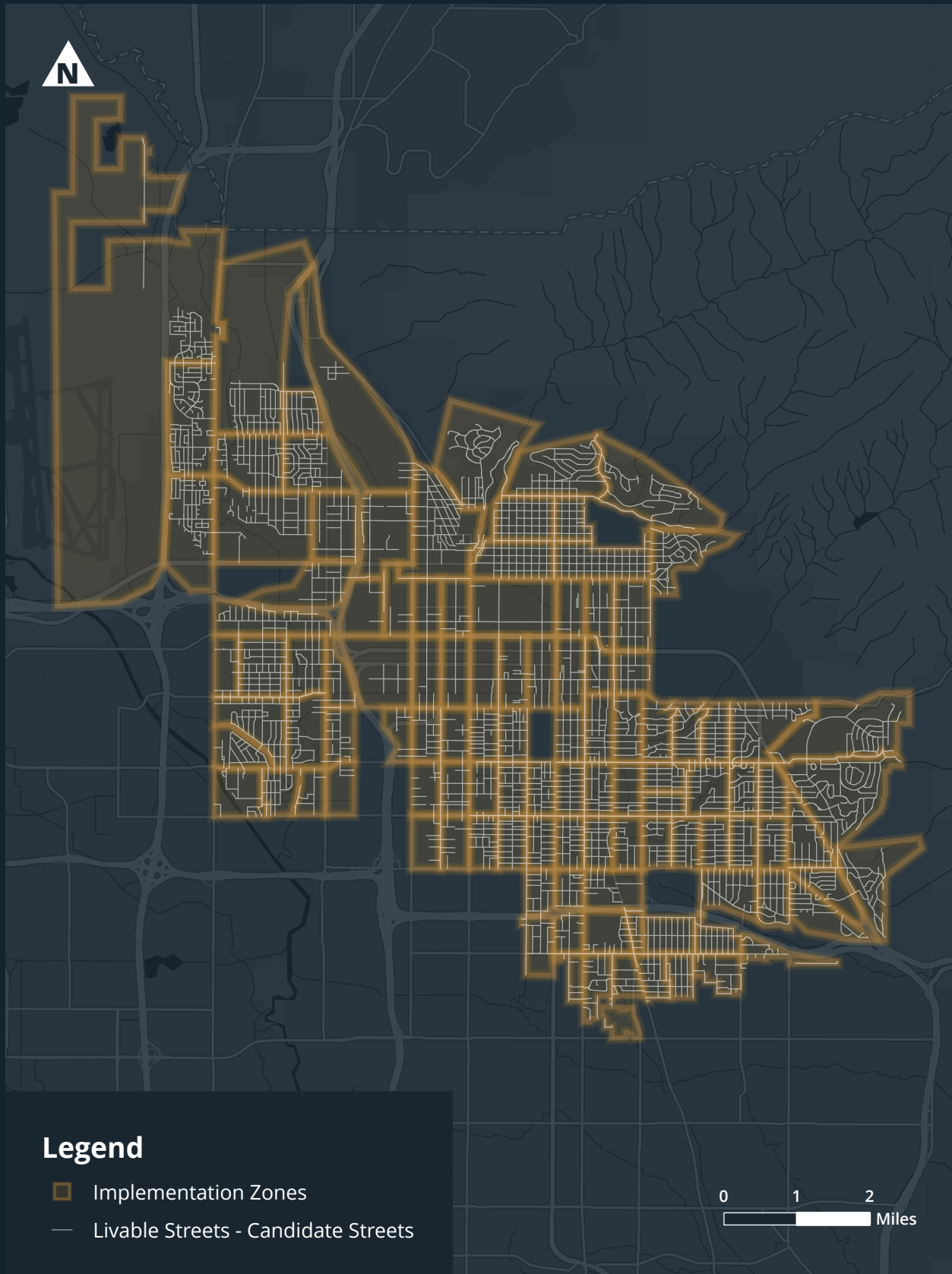


Figure 2: Zone Map



PRIORITIZATION PROCESS

The zone prioritization process was used to identify areas of Salt Lake City in need of more immediate traffic calming implementation. This pursuit of equity relied on a variety of data sets:

CRASH DATA

Recorded traffic crashes on candidate streets during the five-year period of 2016-2020 that resulted in fatalities and/or injuries for pedestrians, bicyclists, and motorists involved.

SPEED DATA

Average speeds recorded by connected, GPS-enabled vehicles (made available through Wejo, a data vendor) and how they compared to the posted speed limit from October 2019.

DEMOGRAPHIC DATA

The number of households within each zone, and the percent of those households recorded as living below the federal poverty line, identifying as Hispanic and/or non-white, and not

having access to a car according to the most recent American Community Survey (2016).

COMMUNITY ASSETS

The density of community assets within a specific zone, including schools, health facilities, community centers, and parks.

Maps of these data sets are included in Attachment A.

These data sets were applied to all zones and summarized within each zone boundary. The number of households in a zone was used to compare the rate or density of each metric within a zone, which was summed to determine a final score for each zone. The sum of those scores determined a final rank for each zone between 1 and 113; a lower number/ranking indicates a higher priority for more immediate implementation.

The prioritized zones are shown in **Figure 3**.



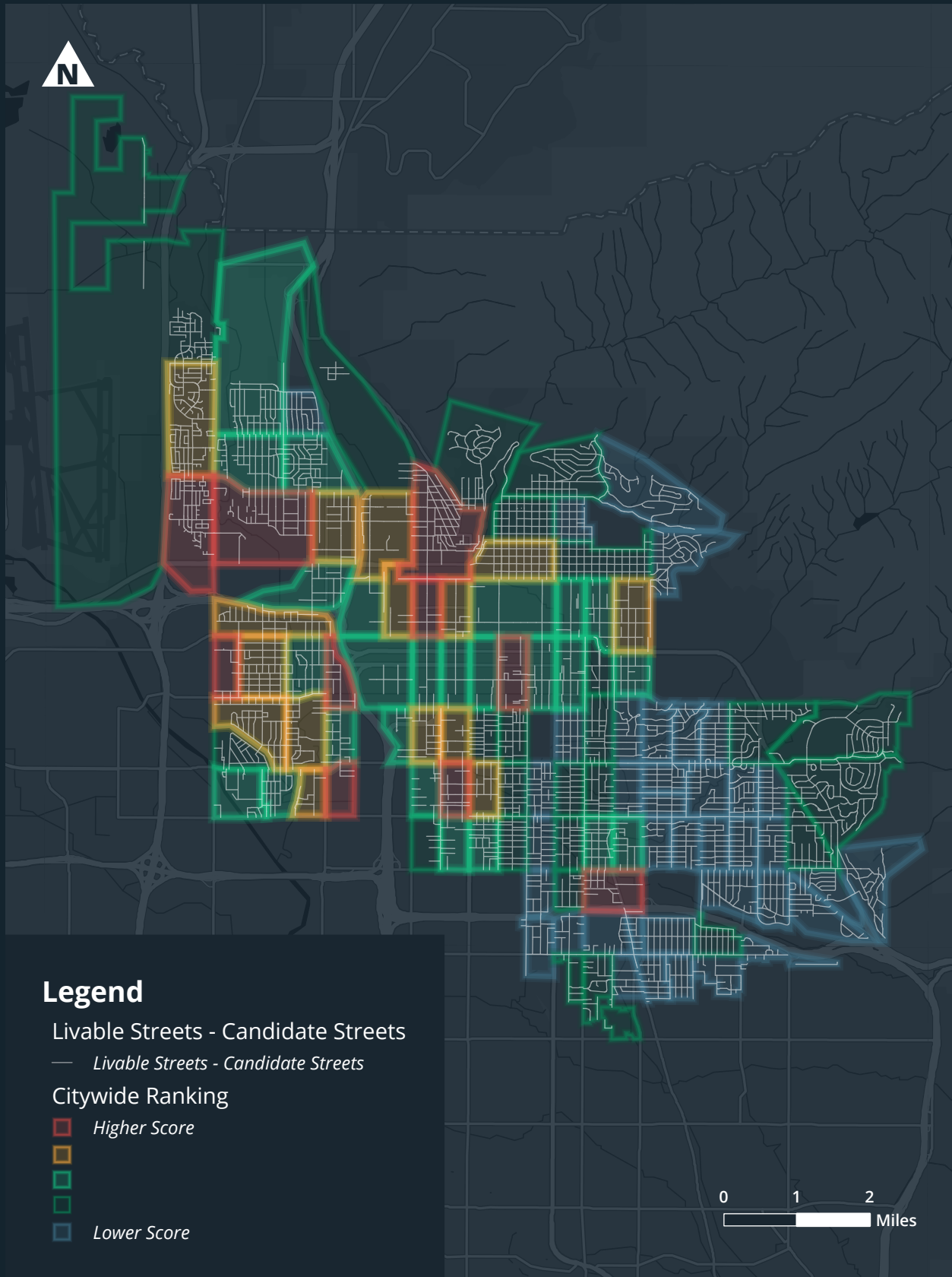


Figure 3: Prioritized Zone Map



TRAFFIC CALMING TOOLKIT

LANCE TYRRELL

The following treatments are what will be implemented through the Livable Streets program if or when it commences. These treatments have been vetted by various departments of the Salt Lake City government, and almost all exist in some form on Salt Lake City streets today.



Potential Treatments

Summary

This Toolbox contains 19 different devices that address concerns such as speeding vehicles, high traffic volumes, cut-through traffic, or safety concerns. The devices vary in their ability to treat various traffic-related concerns. •



A. NON-PHYSICAL DEVICES

- Speed Trailer
- Speed Feedback Sign
- Centerline/Edgeline Lane Striping
- Signage
- Education

B. SPEED CONTROL DEVICES

B1. VERTICAL DEVICES

- Speed Lump/Cushion
- Speed Hump
- Speed Table
- Raised Crosswalk

B2. HORIZONTAL DEVICES

- Traffic Circle
- Roundabout
- Medians with Horizontal Deflection
- Slow Turn Wedges

B3. NARROWING DEVICES

- Curb Extension/Bulb-Out
- Choker
- Pedestrian Refuge Island
- Street Trees

C. VOLUME CONTROL DEVICES

- Forced Turn Island

A. NON PHYSICAL DEVICES

QUICK BUILD OPTION SLC APPROPRIATE

TREATMENT

SPEED TRAILER



APPROXIMATE COST \$10,000 - 15,000

ADVANTAGES

- Relatively low cost
- Quick implementation/immediate feedback
- Does not require officer to be present
- Can be moved to different locations
- Data can be recorded

DISADVANTAGES

- Effectiveness may be temporary

Portable speed trailers visually display drivers' real-time speeds compared to the speed limit. This device serves as an educational tool, as it allows both the driver and other people using the street to observe the actual speeds at which vehicles are traveling. This encourages the driver to adjust their speed in accordance with the speed limit. Speed trailers are not substitutes for permanent actions. If the technology allows it, the agency can use innovative strategies that give positive reinforcement for adhering to the speed limit. Scotland's automated speed signs show drivers who travel the speed limit a smiley face and message such as "thanks for driving safely."

QUICK BUILD OPTION SLC APPROPRIATE

TREATMENT

CENTERLINE/EDGE LINE LANE STRIPING



APPROXIMATE COST \$2-3 / linear foot

ADVANTAGES

- Inexpensive
- Can be used to create bicycle lanes or delineate on-street parking
- Does not slow emergency vehicles

DISADVANTAGES

- Has not been shown to significantly reduce travel speeds
- Requires regular maintenance

Lane striping can be used to create formal bicycle lanes, parking lanes, or edge lines. As a traffic management measure, they are used to narrow the travel lanes for vehicles.

Non-physical devices include any measure that does not require physical changes to the roadway. They are intended to increase drivers' awareness of surroundings and influence driver behavior without physical devices. Because these devices are not self-enforcing, they have limited effectiveness as stand-alone devices and should supplement physical devices.

QUICK BUILD OPTION

SLC APPROPRIATE

TREATMENT

SPEED FEEDBACK SIGN



APPROXIMATE COST \$7,000 - 15,000

ADVANTAGES

- Real-time speed feedback
- Does not physically slow emergency vehicles or buses
- Permanent installation
- Speed and count data can be recorded
- Often solar powered

DISADVANTAGES

- Effectiveness may be temporary
- May require power source or stop working if solar power is insufficient
- Only effective for one direction of travel
- Subject to vandalism

Speed feedback signs measure each approaching vehicle's speed. Real-time speeds are relayed to drivers and flash when speeds exceed the limit. Speed feedback signs are typically mounted on or near speed limit signs and are most common in school zones.

QUICK BUILD OPTION

SLC APPROPRIATE

TREATMENT

SIGNAGE



APPROXIMATE COST \$100 - 750 / sign

ADVANTAGES

- Truck restrictions can reduce through truck traffic
- Turn restrictions can reduce cut-through traffic at specific time of day
- Does not slow emergency vehicles or buses
- Can increase safety at an intersection by prohibiting certain turning movements
- Low cost

DISADVANTAGES

- Turn restrictions require enforcement during time of restriction to be effective
- May divert a traffic problem to another street

Signage that can be used as a traffic management measure include truck restriction signs and signs, and general turn restrictions. Turn-movement restrictions involve the use of signs to prevent undesired turning movements without the use of physical devices. The restrictions may generally apply to turning movements in or out of a residential street to a larger street. The turn-movement restrictions may be permanent or only during peak commute hours.


A. NON PHYSICAL DEVICES (CONT'D)



QUICK BUILD OPTION

SLC APPROPRIATE

TREATMENT

EDUCATION



www.slc.gov/livablestreets

APPROXIMATE COST


Varies

ADVANTAGES

- Relatively inexpensive
- Can be implemented incrementally over time

DISADVANTAGES

- Staff time required to maintain these resources



A variety of education strategies can be used to educate people on the safety risks associated with speeding. Changing driver behavior and attitudes will require increased public safety education. The following strategies can be employed by agencies as funding and Staff resources allow: Brochure - describe the Traffic Calming Program and process. Traffic Safety newsletter (jurisdiction-wide and/or neighborhood specific) - provide information on volumes, speeds, speeding fines (particularly in school zones), and average speeds; describe traffic concerns and recommendations; provide reminders of traffic laws and traffic safety tips for all modes. Website - have a designated page on the agency's website to provide information on the Traffic Calming Program and the same information recommended for the newsletter. Speed yard signs - implement a public safety education campaign targeting safe speeds. Make yard signs available to the public for free. They should be brightly colored and include phrases like, "Look out for each other," "Keep kids safe," and "SLOW DOWN. Drive like you live here."

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B. SPEED CONTROL DEVICES:

B1. VERTICAL DEVICES

Vertical deflection devices use variations in pavement height and alternative paving materials to physically reduce travel speeds. These devices are designed for travel speeds over the device of approximately 15 to 20 MPH depending on the device.

QUICK BUILD OPTION

SLC APPROPRIATE

TREATMENT

SPEED LUMP/CUSHION



APPROXIMATE COST \$3,000 - 5,000

ADVANTAGES

- Effective in reducing speeds
- Maintains rapid emergency response times
- Relatively easy for bicyclists to cross

DISADVANTAGES

- Maintenance and snow removal can be challenging
- Vehicles with wide wheel base can pass through the lump using the wheel cut-outs
- Increased noise from vehicles accelerating

Speed lumps are rounded, raised areas placed across the road with two wheel cut-outs designed to allow large vehicles, such as emergency vehicles and buses, to pass with minimal slowing. The design limits passenger cars and mid-size SUVs from fully passing through the cut-outs and requires travel over the lump. They are slightly less than four inches high, typically parabolic in shape, and have a design speed of 15 to 20 MPH. A series of speed lumps are often needed to retain slower speeds over a longer distance.

QUICK BUILD OPTION

SLC APPROPRIATE

TREATMENT

SPEED HUMPH



APPROXIMATE COST \$3,000 - 5,000

ADVANTAGES

- Effective in reducing speeds

DISADVANTAGES

- Slows down emergency vehicles and buses
- Maintenance and snow removal can be challenging
- Increased noise
- More difficult for bicyclists to cross

Speed humps are rounded raised areas placed across the road, but unlike speed lumps, they do not have cut-outs for large vehicles and bicycles. They are typically 3-3.5 inches high, typically parabolic in shape, and have a design speed of 15 to 20 MPH. A series of speed humps are often needed to retain slower speeds over a longer distance.

B. SPEED CONTROL DEVICES:

B1. VERTICAL DEVICES (CONT'D)

QUICK BUILD OPTION

SLC APPROPRIATE

TREATMENT

SPEED TABLE



APPROXIMATE COST \$20,00 - 30,000

ADVANTAGES

- Effective in reducing speeds, though not to the extent of speed lumps
- Maintenance easier than speed lumps
- Slightly higher design speed compared to speed lumps makes them compatible with collector streets and on grades

DISADVANTAGES

- Increased noise

Speed tables are flat-topped speed humps approximately 22 feet long, which is typically long enough for the entire wheelbase of a passenger car to rest on top. Their long flat fields, plus ramps that are more gently sloped than speed lumps, give speed tables higher design speeds than lumps and thus may be more appropriate for streets with higher ambient speeds. Concrete is the preferred material. Stamped concrete can give the appearance of brick or other textured materials, which would improve the appearance of speed tables, draw attention to them, and may enhance safety and speed reduction.

QUICK BUILD OPTION

SLC APPROPRIATE

TREATMENT

RAISED CROSSWALK



APPROXIMATE COST \$20,000 - 30,000

ADVANTAGES

- Effective in reducing speeds, though not to the extent of speed lumps
- Maintenance easier than speed lumps
- Improve safety for both vehicles and pedestrians

DISADVANTAGES

- Increased noise
- Impact to drainage needs to be considered

Raised crosswalks are speed tables striped with crosswalk markings and signage to channelize pedestrian crossings, providing pedestrians with a level street crossing. Also, by raising the level of the crossing, pedestrians are more visible to approaching motorists. Stamped concrete can give the appearance of brick or other textured materials, which would improve the appearance of speed tables, draw attention to them, and may enhance safety and speed reduction.

B. SPEED CONTROL DEVICES:

B2. HORIZONTAL DEVICES

Horizontal deflection devices use raised islands to eliminate straight-line paths along roadways and through intersections.

QUICK BUILD OPTION SLC APPROPRIATE

TREATMENT

TRAFFIC CIRCLE



APPROXIMATE COST \$15,000 - 50,000

ADVANTAGES

- Very effective in moderating speeds and improving safety
- Can have positive aesthetic value

DISADVANTAGES

- If not designed properly, difficult for emergency vehicles or large trucks to travel around
- Must be designed so that the circulating traffic does not encroach on crosswalks
- Potential loss of on-street parking

Traffic circles are raised islands, placed in intersections, around which traffic circulates. Stop signs or yield signs can be used as traffic controls at the approaches of the traffic circle. Circles prevent drivers from speeding through intersections by impeding the straight-through movement and forcing drivers to slow down to yield. Depending upon the size of the intersection and circle, trucks may be permitted to turn left in front of the circle, and the agency can use mountable curbs if turn radii are a concern for emergency vehicles and/or trucks.

QUICK BUILD OPTION SLC APPROPRIATE

TREATMENT

ROUNDAABOUT



APPROXIMATE COST \$150,000+

ADVANTAGES

- Enhanced safety compared to a traffic signal or stop sign
- Minimizes queuing at approaches to the intersection
- Less expensive to operate than traffic signals
- Can have positive aesthetic value
- Shorter pedestrian crossing distance

DISADVANTAGES

- May require major reconstruction of an existing intersection
- Loss of on-street parking
- Continuous flow of traffic limits opportunity for pedestrians to cross (compared to signal)
- May present additional obstacles to visually impaired pedestrians

Like traffic circles, roundabouts require traffic to circulate counterclockwise around a center island. But unlike circles, roundabouts are used on higher volume streets to allocate right-of-way among competing movements. They are found primarily on collector streets, often substituting for traffic signals. They are larger than neighborhood traffic circles, have raised splitter islands to channel approaching traffic to the right, and do not have stop signs. Due to large amount of required right-of-way and construction costs, roundabouts may be most appropriate for new developments or redevelopment areas.

B. SPEED CONTROL DEVICES:

B2. HORIZONTAL DEVICES (CONT'D)

QUICK BUILD OPTION

SLC APPROPRIATE

TREATMENT

MEDIANS WITH HORIZONTAL DEFLECTION



APPROXIMATE COST \$10,000 - 15,000

ADVANTAGES

- Effective in moderating speeds and improving safety
- Where pedestrian crossing activity is expected, can provide two-stage crossing opportunities
- Can have positive aesthetic value

DISADVANTAGES

- Can increase potential for fixed object collisions
- Potential loss of on-street parking

Medians are raised islands placed in the middle of the roadway around which traffic circulates. Medians do not always have horizontal deflection. To meet this definition, a median must extend into the travel lane to eliminate the straight-line path and force drivers to slow down to navigate around the measure.

QUICK BUILD OPTION

SLC APPROPRIATE

TREATMENT

SLOW TURN WEDGES



APPROXIMATE COST \$1,000 - 3,000

ADVANTAGES

- Effective in reducing speeds and conflicts with pedestrians/bicyclists
- Discourages drivers from cutting corners and encourages following the proper path when making left turns
- Low cost

DISADVANTAGES

- Potentially limited to one-way streets
- Less durable than raised concrete islands

Slow turn wedges use markings and flexible plastic posts to buffer pedestrians from traffic and shrink the area where they could get hit by a car.

B. SPEED CONTROL DEVICES:

B3. NARROWING DEVICES

Narrowing devices use raised islands, curb extensions, and other treatments to narrow the travel lane for motorists. They are not as effective as vertical or horizontal devices, but can still provide traffic calming.

QUICK BUILD OPTION SLC APPROPRIATE

TREATMENT

BULB-OUT/CURB EXTENSION



APPROXIMATE COST \$20,000 - 100,000

ADVANTAGES

- Reduces pedestrian crossing distance and exposure to vehicles
- Through and left-turn movements are easily negotiable by large vehicles
- Creates protected on-street parking bays
- Reduces speeds (especially right-turning vehicles)

DISADVANTAGES

- Effectiveness is limited by the absence of deflection
- May slow right-turning emergency vehicles
- Potential loss of on-street parking

Bulb-outs and curb extensions extend the sidewalk or pedestrian space to narrow the roadway. Their effectiveness in calming traffic is limited by the absence of vertical or horizontal deflection, but they can still be beneficial. Bulbouts can make intersections more pedestrian friendly by shortening the crossing distance and decreasing the curb radii, thus reducing turning vehicle speeds. Both of these effects increase pedestrian comfort and safety at the intersection.

QUICK BUILD OPTION SLC APPROPRIATE

TREATMENT

CHOKER



APPROXIMATE COST \$20,000 - 60,000

ADVANTAGES

- Easily negotiable by emergency vehicles and buses
- Can have positive aesthetic value
- Reduces speeds

DISADVANTAGES

- Effect on vehicle speeds is limited by the absence of vertical or horizontal deflection
- May require bicyclists to briefly merge with vehicular traffic
- Loss of on-street parking
- Build-up of debris in gutter

Chokers are curb extensions at midblock that narrow a street. Chokers leave the street cross section with two lanes that are narrower than the normal cross section. Their effectiveness in calming traffic is limited by the absence of vertical or horizontal deflection, but they can still be beneficial.

B. SPEED CONTROL DEVICES:**B3. NARROWING DEVICES (CONT'D)****QUICK BUILD OPTION** **SLC APPROPRIATE**

TREATMENT

PEDESTRIAN REFUGE ISLAND

APPROXIMATE COST \$10,000 - 20,000

ADVANTAGES

- Can increase pedestrian safety
- Can have positive aesthetic value
- Reduces speeds

DISADVANTAGES

- Effect on vehicle speeds is limited by the absence of vertical or horizontal deflection
- Potential loss of on-street parking

Medians are raised islands placed in the middle of the roadway around which traffic circulates. Medians without horizontal deflection do not extend into the travel lane, maintaining a straight-line path for drivers. While they are not as effective as medians with horizontal deflection, they can still be beneficial. They can act as pedestrian refuges, increasing pedestrian safety, and provide aesthetic benefits.

QUICK BUILD OPTION **SLC APPROPRIATE**

TREATMENT

STREET TREES

APPROXIMATE COST Varies

ADVANTAGES

- Low cost
- Positive aesthetic value and placemaking
- Reduces speeds, though studies limited
- Environmental benefits like reduced flooding and carbon emissions
- Shade enhances pedestrian experience

DISADVANTAGES

- Requires maintenance

Trees placed along streets can potentially help reduce motor vehicle speeds and collisions, though studies show mixed results. Streets lined with trees or with landscaped center medians can affect driver perception of lane width, called an "edge effect". Street trees require irrigation in arid climates

C. VOLUME CONTROL DEVICES

Diversion devices use raised islands and curb extensions to preclude particular vehicle movements, such as left turn or through movements, usually at an intersection.

QUICK BUILD OPTION SLC APPROPRIATE

TREATMENT

FORCED-TURN ISLAND



APPROXIMATE COST \$10,000 - 20,000

ADVANTAGES

- Can improve safety at an intersection by prohibiting critical turning movements
- Reduces traffic volumes

DISADVANTAGES

- If designed improperly, drivers can maneuver around the island to
- make an illegal movement
- May divert a traffic problem to a different street

Forced-turn islands are raised islands that prohibit certain movements on approaches to an intersection.

PROGRAM MANAGEMENT

The potential scope and impact of the Livable Streets Program is immense and will require dedicated management and resources to ensure its continued success. The management of the Program can generally be described as requiring focus on community outreach and implementation.



OUTREACH

The Livable Streets Program will benefit from early community outreach through application of a consistent set of strategies. Outreach will inform Program staff of local issues and inform residents of upcoming changes to their neighborhoods. The Livable Streets Program Public Engagement Toolkit, included in this report as an attachment, is a thoughtful strategy for repeatable community engagement that should produce optimal outcomes for residents and City staff alike.



IMPLEMENTATION

Eventual implementation will depend heavily on funding amount, staffing, community input, and the development of design standards and prototypes. However, annual funding for the program should fall somewhere between \$700,000 and \$1,000,000 annually, covering program staffing, community engagement and implementation needs. For comparison, recent Capital Improvement Plan (CIP) funding for transportation projects has allocated approximately \$15,000,000 annually; the Livable Streets Program would represent approximately five to seven percent of that budget.

To understand how individual treatments from the traffic calming toolkit could be applied to SLC neighborhoods, three of the highest priority zones were used as test cases for example implementation. Treatments included in the following figures are examples only; full engineering design and analysis, community input, and City approval will be required before any traffic calming improvements are installed as part of the Livable Streets Program. These examples are shown in **Figures 4 through 6**.



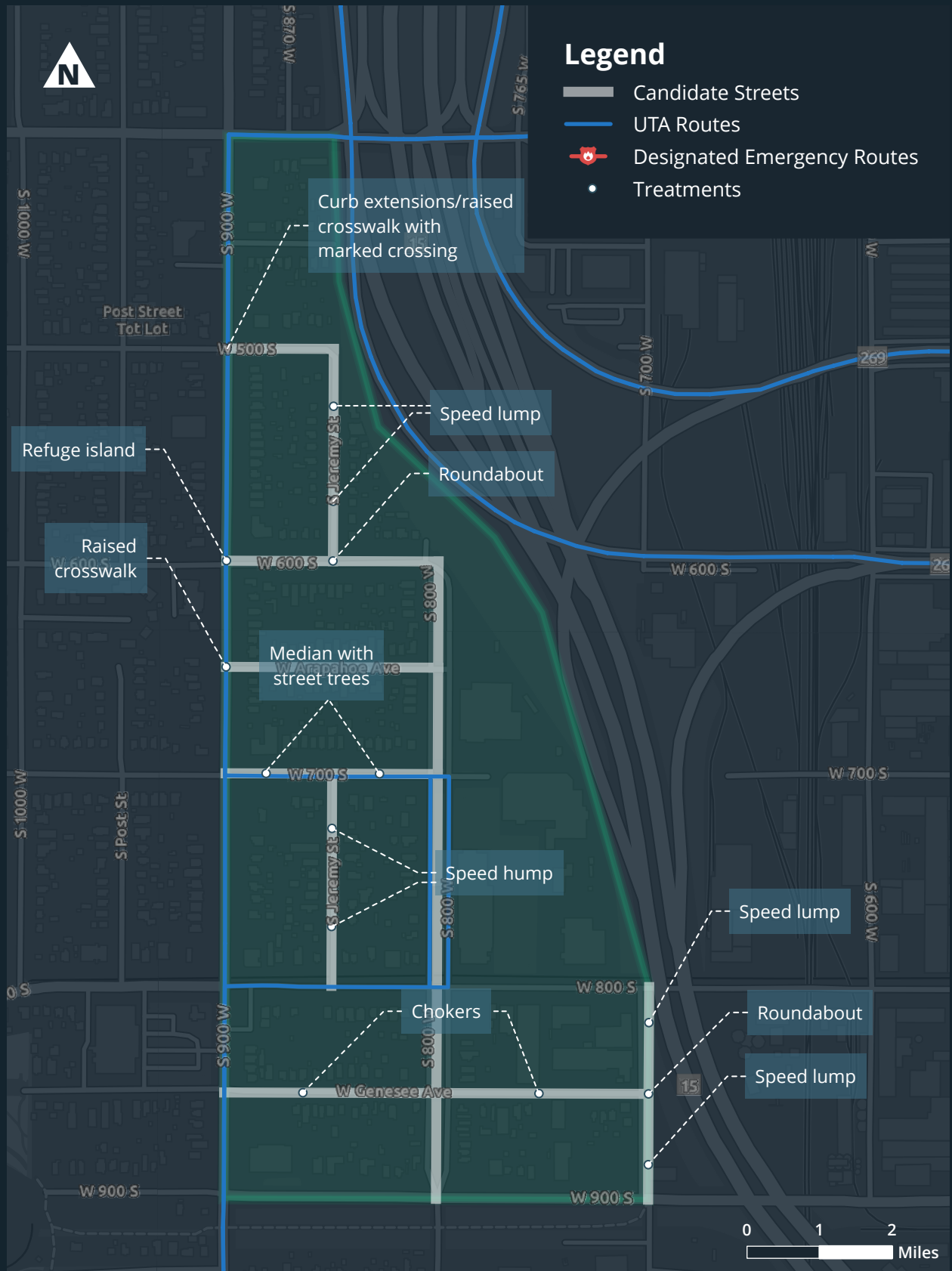


Figure 4: Example Treatment Application #1



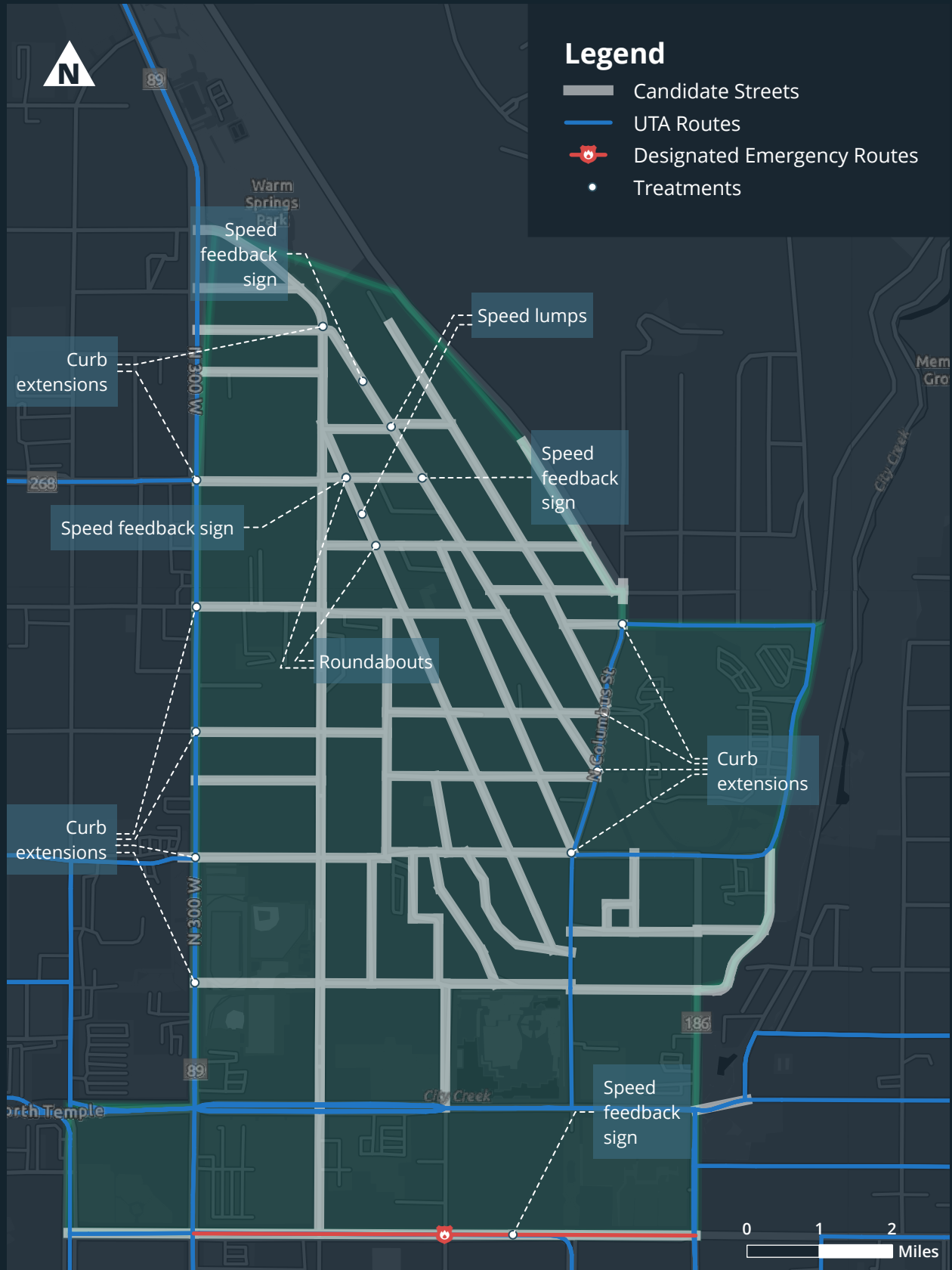


Figure 5: Example Treatment Application #2



RECOMMENDATIONS

The Livable Streets Program will require at least three full-time staff members to manage ongoing outreach and implementation efforts. Staffing at the program outset to develop design prototypes and eventual typical designs may require input from staff outside of the Livable Streets Program.

Support from various departments beyond the Communities and Neighborhoods group will be needed, as coordination with Engineering and Public Utilities will be crucial to the development, implementation, and maintenance of effective traffic calming treatments. Additionally, consistent messaging and support from City Council and the Mayor's office will be essential to the Program's longevity.

As mentioned elsewhere in this report, early and effective coordination with other agencies, most notably the UTA and Salt Lake City Fire Department, will be crucial to the success of the Program. Strong, reliable support from within the Transportation Division and elected officials may be needed if other agencies push back against the implementation of traffic calming at a City-wide scale, as the slowing of traffic and general tightening of roadways does not always align with partner agencies' goals.



Regularly evaluate program performance at the zone- or treatment-level to ensure that target outcomes are achieved, and that traffic calming treatments are not delivering unintended outcomes. This will require ongoing engagement and communication with neighborhoods where traffic calming has been implemented, and through the collection of pre- and post-implementation traffic data including traffic volumes and speeds.

Finally, for the Livable Streets Program to achieve its goals, sustained support will be required over many years. The success of the Program will depend heavily on how Salt Lake City residents respond to all facets of the Program; clear, consistent messaging describing the scope and scale of the Livable Streets Program from its outset will be paramount.

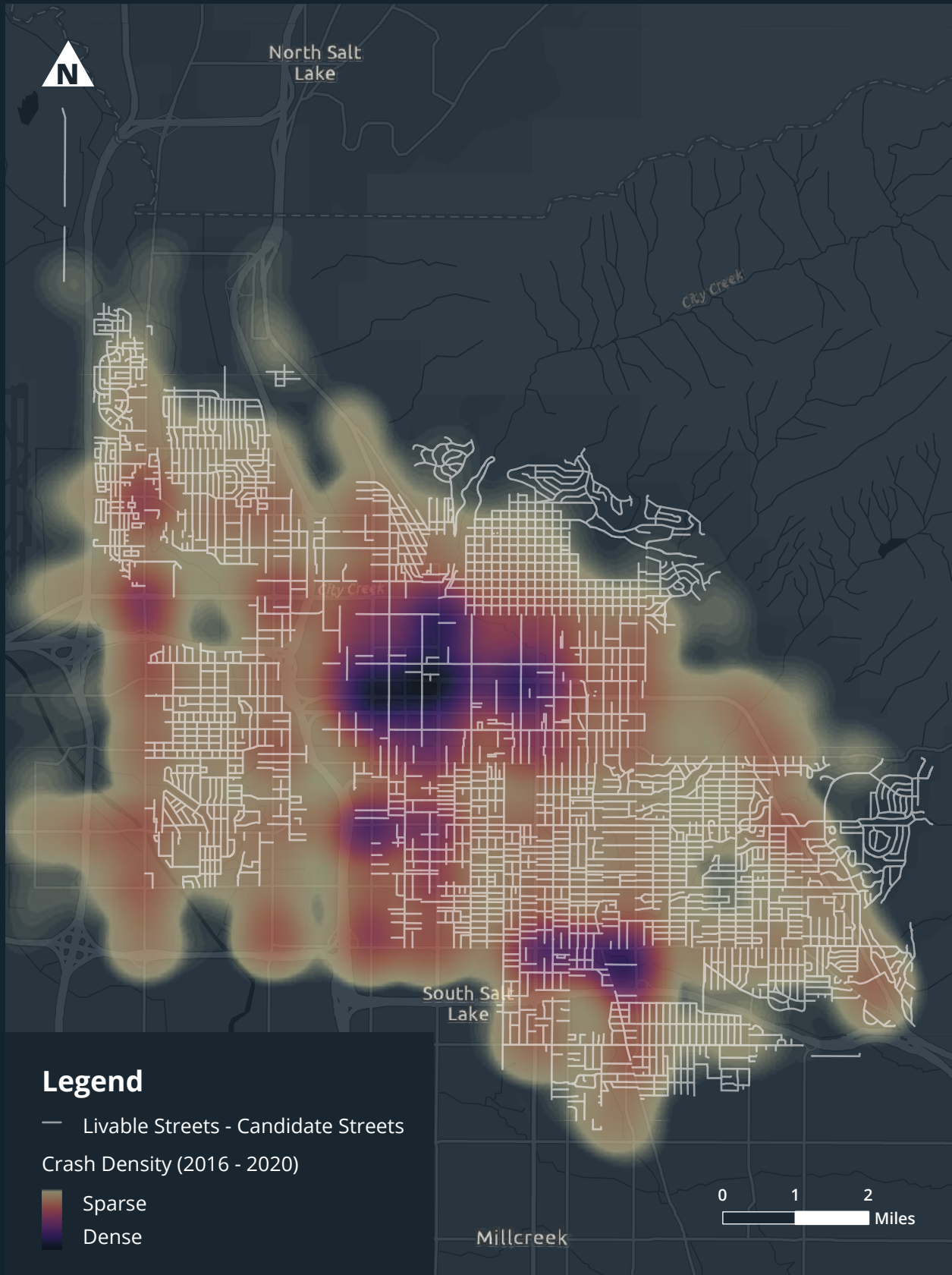


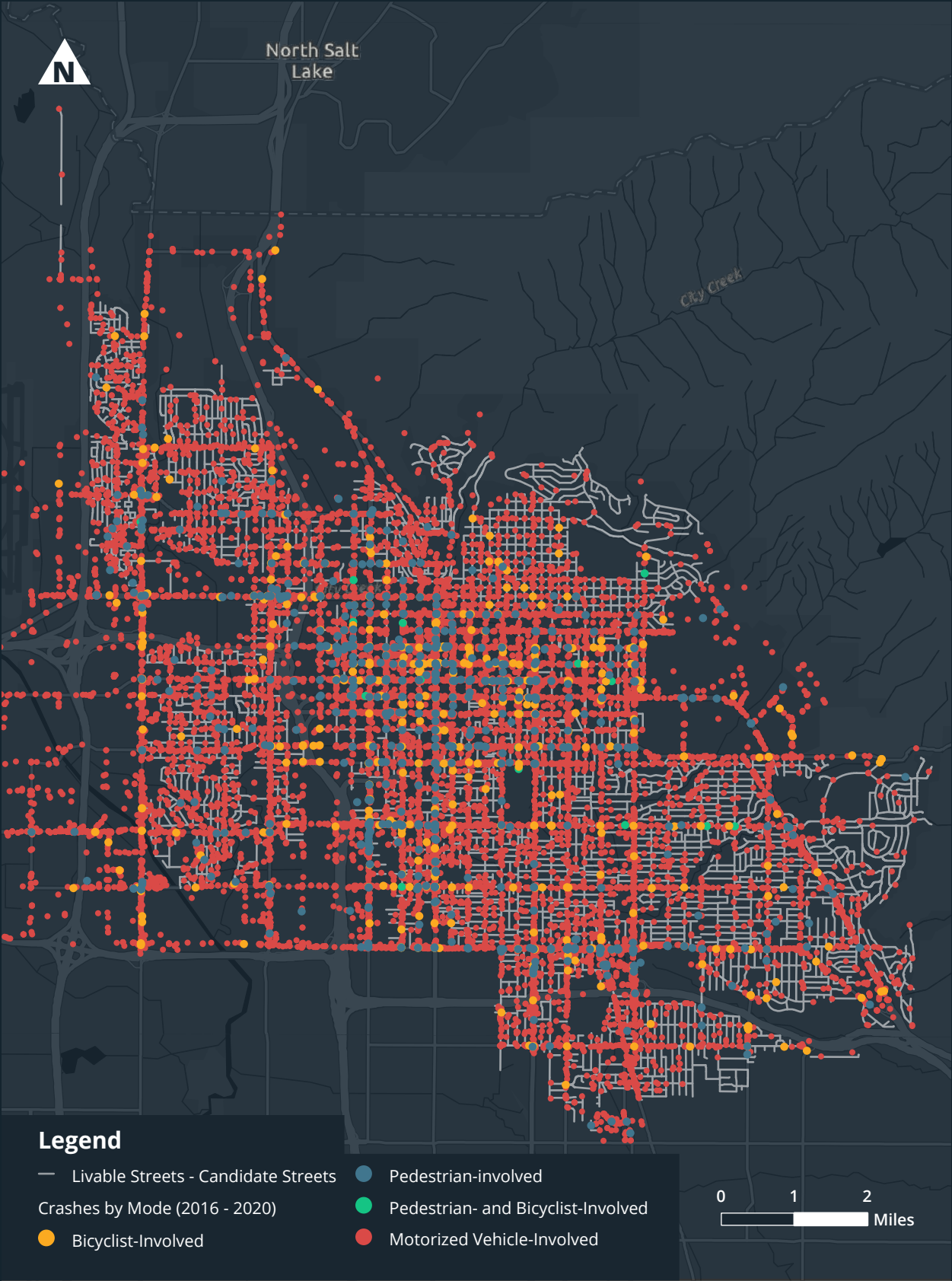
ATTACHMENTS

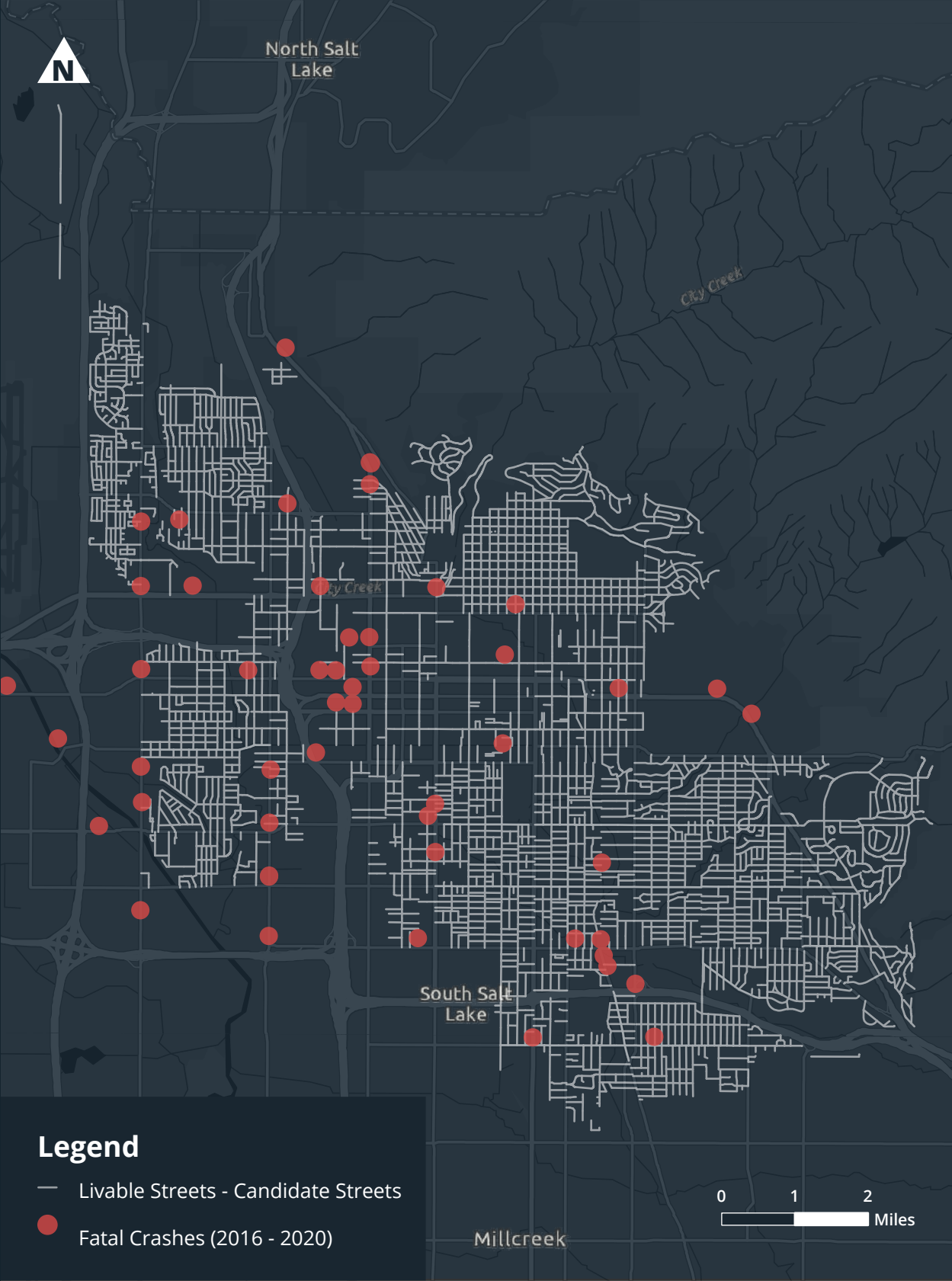
A. Prioritization Process Maps

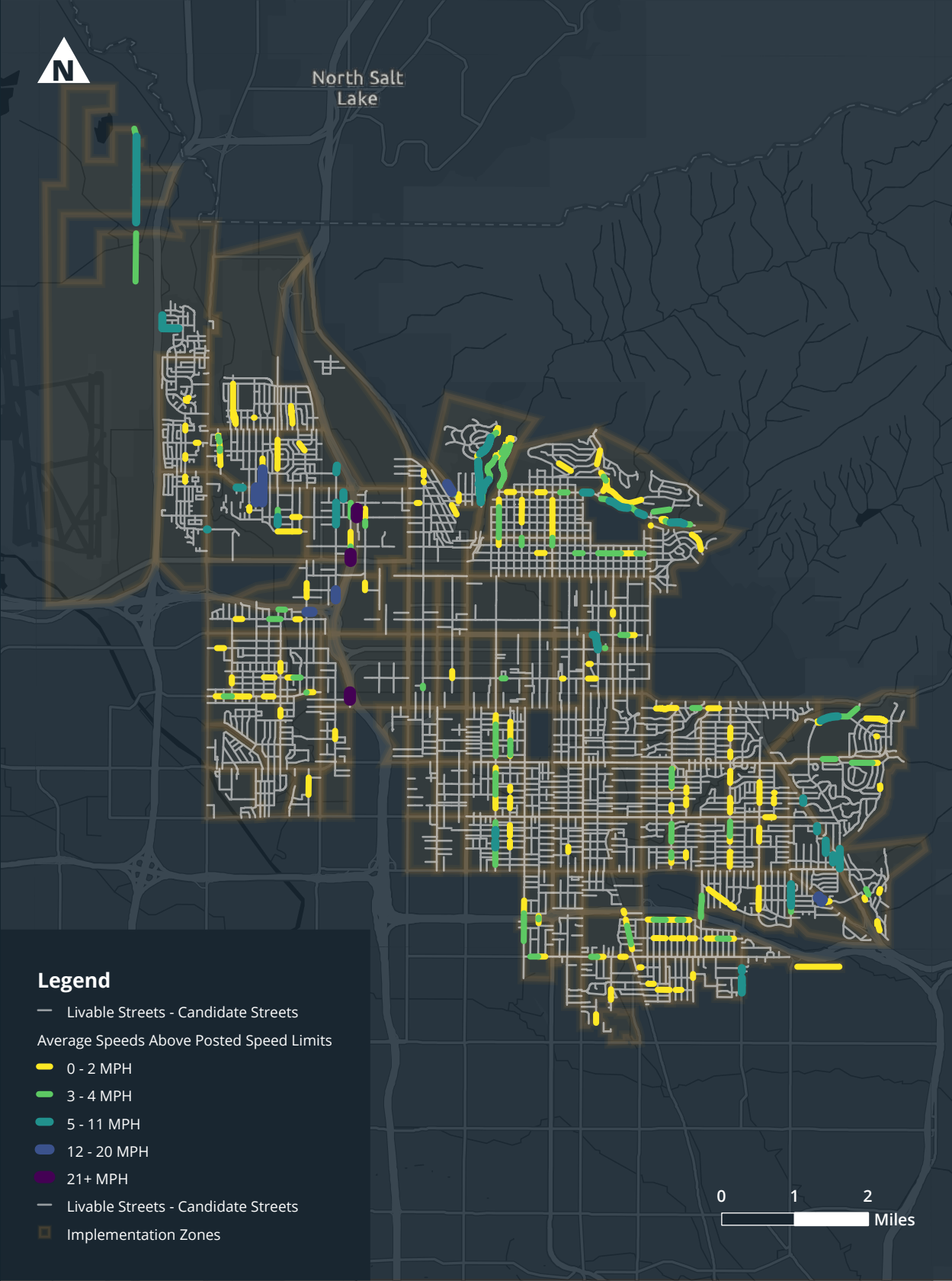
B. Public Outreach Toolkit

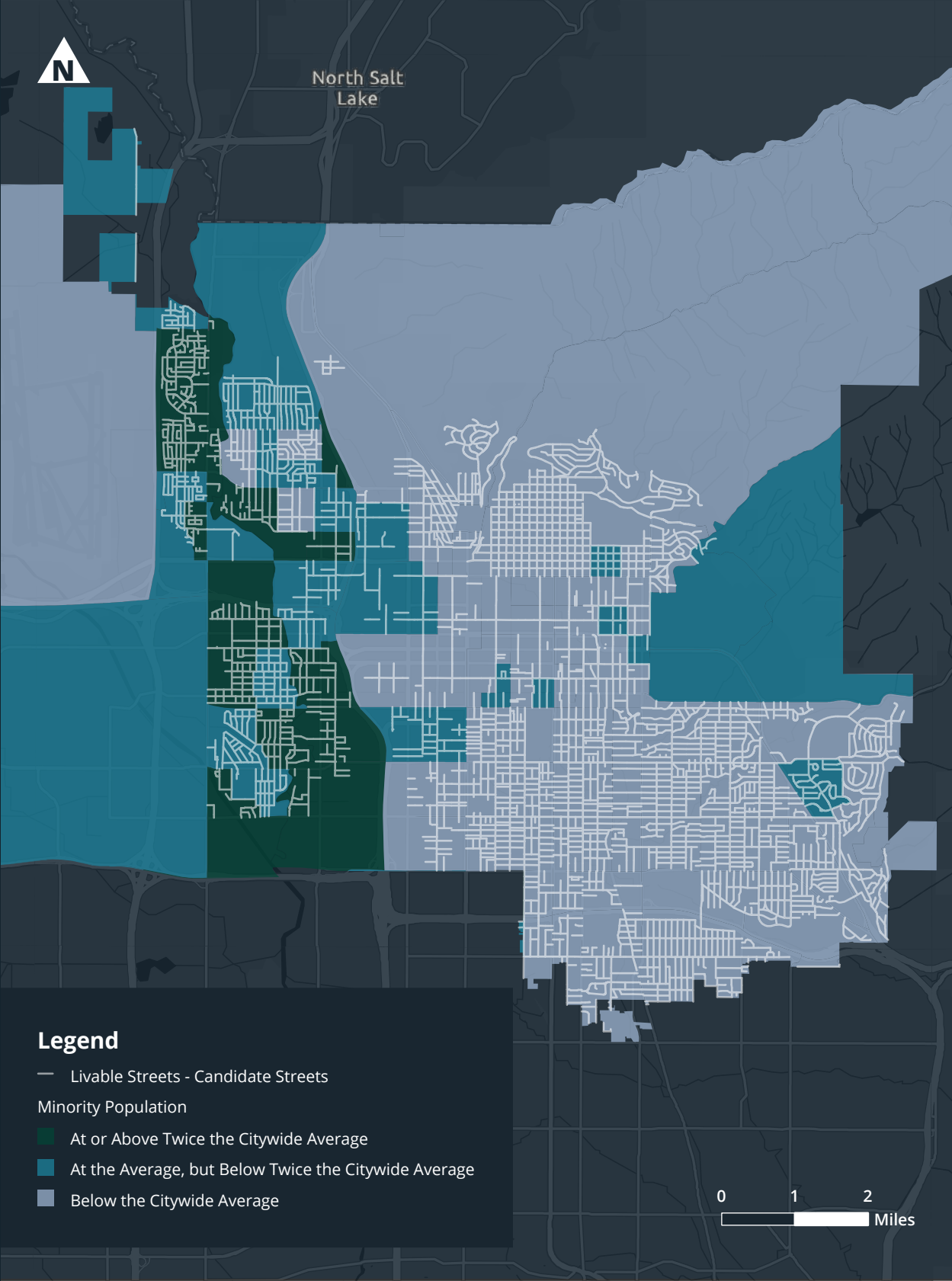


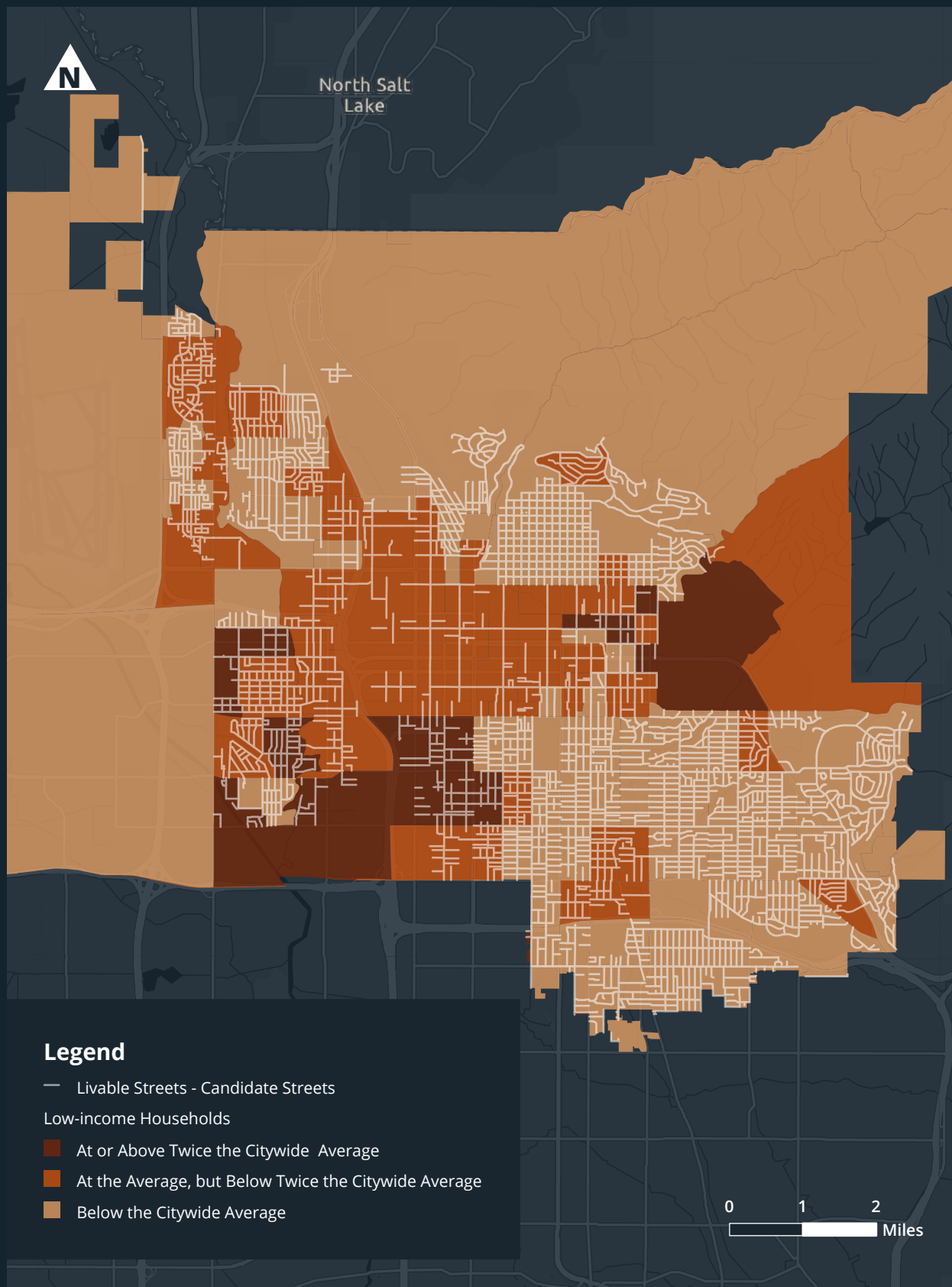


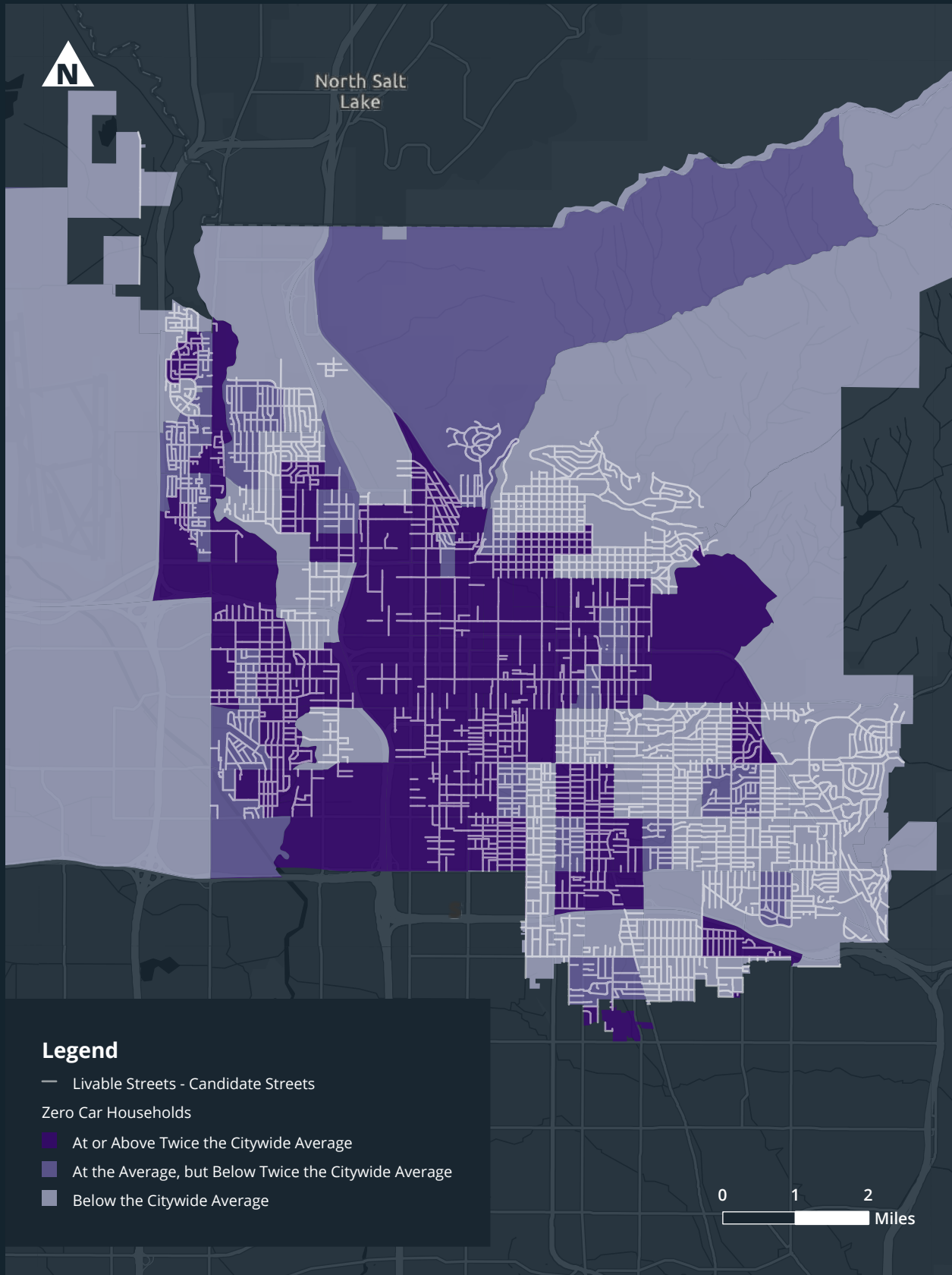


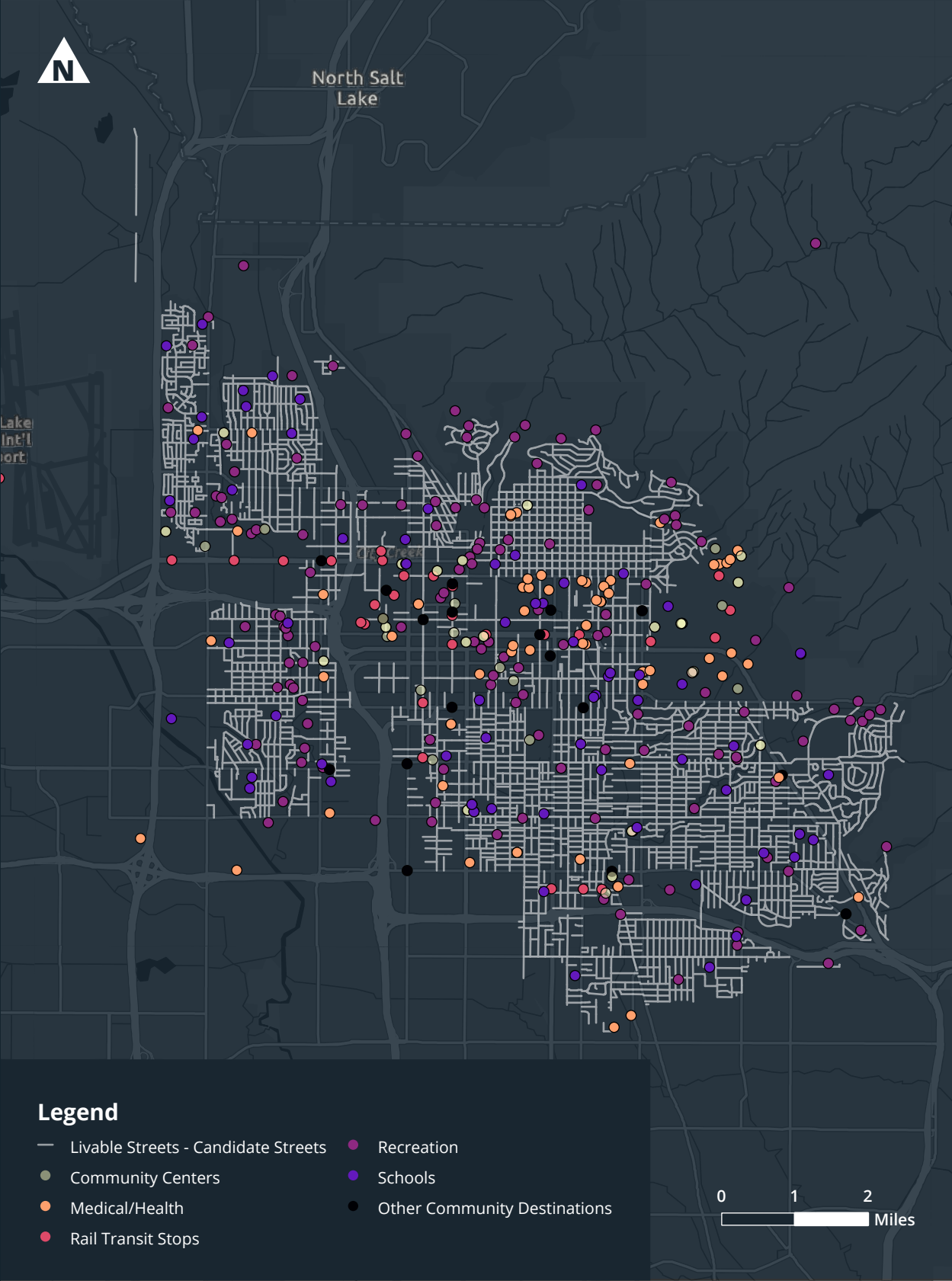














LIVABLE STREETS PROGRAM

SALT LAKE CITY



Image Credit: Lance Tyrell

PUBLIC ENGAGEMENT TOOLKIT



July 14, 2021

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PROGRAM OVERVIEW

Image Credit: Lance Tyrell

Salt Lake City believes that our neighborhood streets should be safe and comfortable for all types of road users. The Livable Streets Program is designed to assess a variety of data to determine where measures should be implemented to calm traffic and improve the overall safety, livability, and attractiveness of neighborhood streets in Salt Lake City. These measures can range from sidewalks and crosswalks, to bicycle lanes and median islands, or even street trees and landscaping. Roadway issues can occur on a single block or throughout a portion of the City, depending on the type of roads and traffic that exist there. This program aims to plan and implement measures that address area-specific needs.

Specific initiatives and improvement tactics will be determined by the Livable Streets team in consultation with other representatives from Transportation, Engineering and the affected Community Council(s) and their constituents, using the guiding principles of Equity, Safety, Sustainability, and Good Governance. Other City transportation plans and policies will also be considered during the process. Those include the [Salt Lake City Pedestrian and Bicycle Master Plan](#) and the Transportation Master Plan currently in development. Learn more about how residents, community councils and other neighborhood groups will be engaged in the Livable Streets process on **page 6**.



APPLICABLE STREETS

LANCE TYRRELL

The program has created a series of 113 zones across Salt Lake City for neighborhood streets that are:

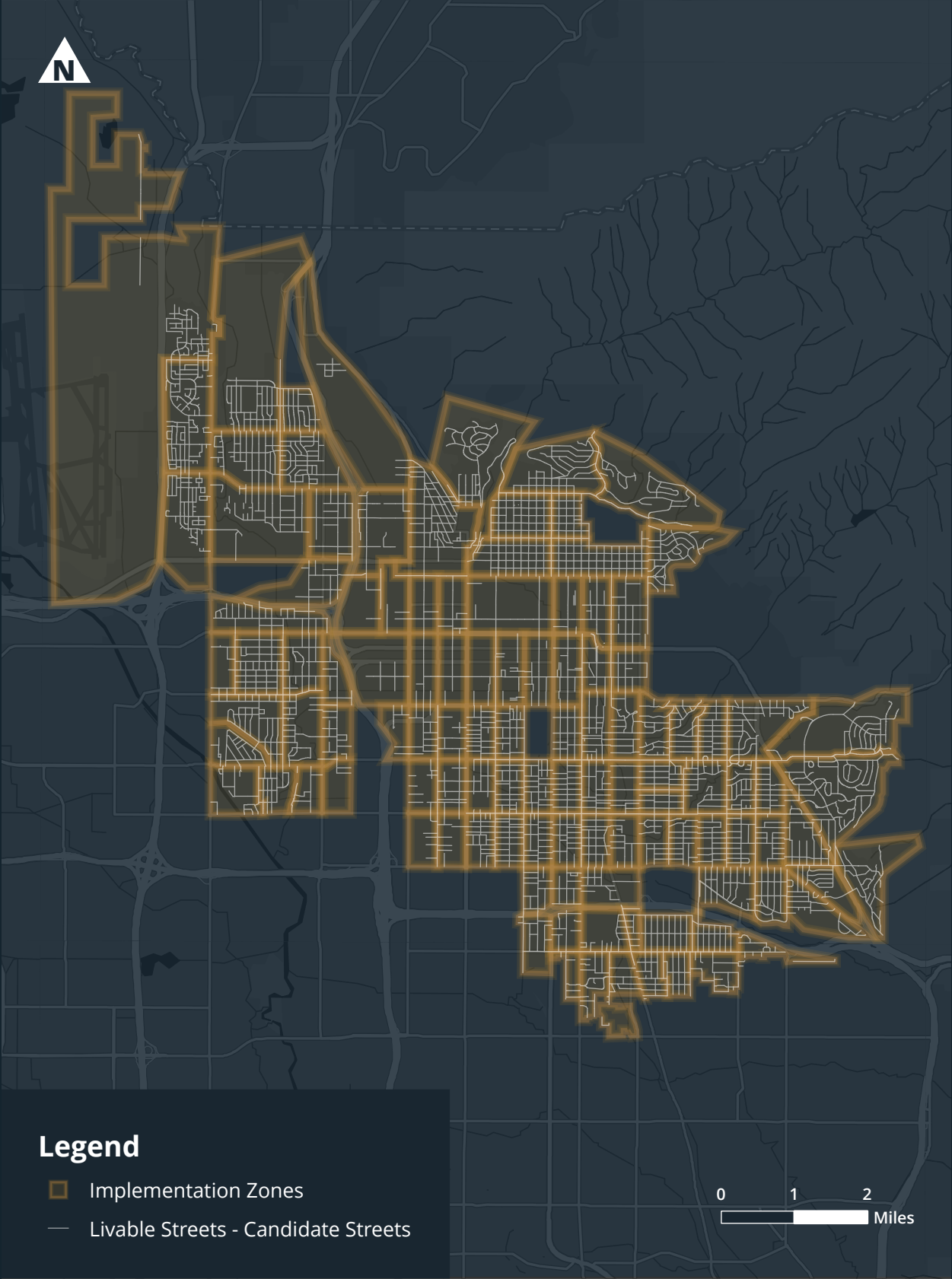
- City-owned
- Posted speed limit of 30 mph or less
- 3 lanes or fewer
- In areas with a residential land use component

These neighborhood streets must not already be included in upcoming City Transportation or Engineering Division projects, cannot include those maintained by the Public Lands Division and are

not institutional (i.e. University or other internal campus routes).

Zones, which will be the areas in which outreach and implementation happens, were established based on natural barriers, major streets, and City Council district boundaries. Zones were sized to be roughly similar, though variation was inevitable based on the presence or absence of these factors.





SELECTION AND IMPLEMENTATION

Image Credit: Lance Tyrell

The Livable Streets Team has created the following prioritization process based on data to help identify areas with the greatest need for improvements. Data used to inform the prioritization process is from 2016-2020 and includes:

- crashes with recorded injuries
- the average speed over the speed limit
- density of community assets like parks, schools, trails, etc.
- number of households within each zone
- percent of households in the zone without a car over the City-wide average

Zones that generated the highest scores from these criteria have been prioritized for Livable Streets improvements. Continued evaluation of zones will occur as new data allows.

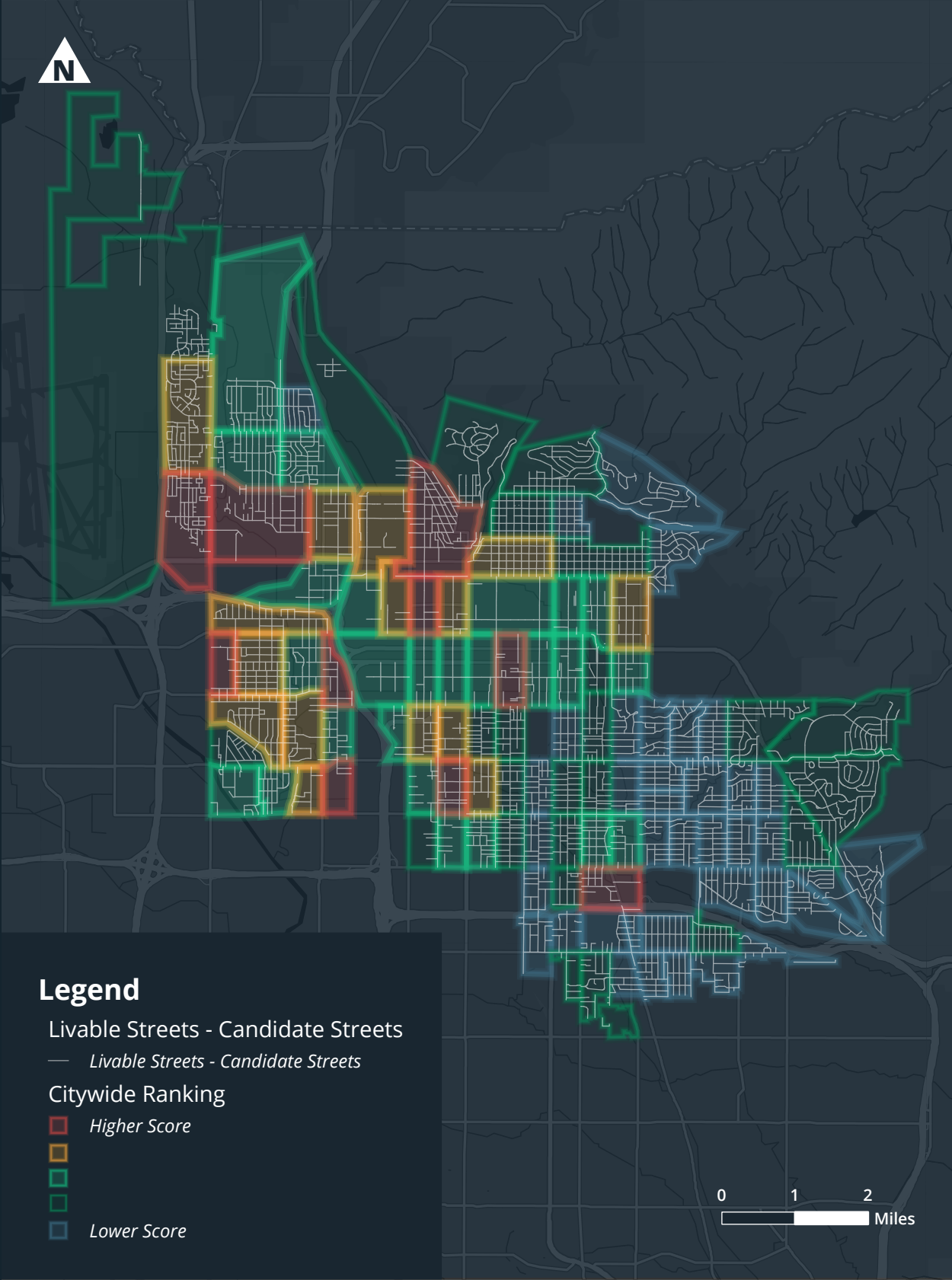
The map on page 5 details the prioritization of zones based on the criteria for assessment in 2021-

2022. This map and future evaluation and zone identification maps will be made available on the project website: www.slc.gov/transportation/plans-studies/livable-streets

Once the list of high-scoring zones is developed based on the criteria above, the Livable Streets team will:

1. Assess potential solutions that could be implemented to make candidate streets in a given zone more livable.
2. Coordinate with residents in a given zone to review the potential solutions and gather feedback.
3. Develop a cost-estimate, design and plans.
4. Provide an update to the affected street, block or neighborhood and the respective Community Council(s) based on the final zone implementation plan.
5. Share the implementation plan and timeframe.





PUBLIC ENGAGEMENT

Early constituent and community engagement is critical to the success of the Livable Streets program. The intent is to engage with residents and community members in the high scoring zones, to share the potential solution and ensure that they have the opportunity to get engaged early. Best practices in public engagement can be found in the Salt Lake City Civic Engagement Guide here: www.slcc.gov/can/wp-content/uploads/sites/8/2019/09/Engagement-Guide-3.0.pdf

INITIAL PROGRAM OUTREACH: During program development, the Livable Streets team conducted a public survey distributed

to all Community Council chairpersons and presentations to interested Community Councils to gather information about how the program funds should be administered and whether there other additional data sources should be considered in the criteria. The survey was also promoted via the program webpage, City Feedback Community and City social media feeds including Facebook, Twitter and Nextdoor.

The results of the survey, along with the overall design of the program will be presented to the Salt Lake City Council for ratification and approval in late 2021.



PROGRAM LAUNCH: Once confirmed by the City Council, presentations will be made to announce the new program, share the scoring criteria and resulting high-scoring zones, and finally the implementation plan. Presentations should first be made to the community councils in which high-scoring zones have been identified, then to the remaining community councils to announce the new program. Finally, social media posts explaining the program should be distributed via Salt Lake City's Transportation, Civic Engagement and Engineering channels utilizing the templates provided in **Appendix A**.

Notification for high-scoring zones should occur following announcement of the program and directly in advance of the presentation to their respective Community Council meeting. The notice should utilize the flier template included in Appendix A, explain the goals of the program, why the respective zone and included streets qualified and invite residents to participate in the Community Council meeting. Fliers should be provided to all residents within one block in all directions of the identified high-score zone.

Presentations to all Community Councils are only recommended during program launch. Following notification of the program and initial high-scoring zones, smaller community -based engagement is recommended. See below.

PROGRAM WEBSITE: Information about the program, zone development and street

scores must be accessible to the public and communicated clearly on the [program website](#). The website will be regularly updated as improvements are implemented and new high scoring zones are identified (as funding is available). The website will not be the only means of communication or engagement about this program.

COMMUNITY NOTIFICATION: Each time one or more high-scoring zone(s) are identified, the following process should occur:

- Update the program website and map
- Postcard or flier notification to the affected block or zone
- Zone Meeting.
- Community Council Chair notice - when a Zone meeting is held, email notice to the affected Community Council Chair person and provide information for inclusion in their respective communication(s).

COMMUNITY MEETINGS: Once residents have been notified of a high-scoring zone, potential solutions should be discussed via a zone meeting.

These meetings are designed as open forums for discussion because there are often multiple solutions that could be implemented to meet the needs of the community and the Livable Streets program goals. The preferred Livable Streets solution should be confirmed through a consensus-based approach by:



1. meeting with those most directly adjacent to the location of issue to be resolved
2. reviewing the potential solution(s), changes to the street and costs
3. weighing the benefits and risks of each solution
4. listening to concerns, answering questions and considering alternatives
5. developing opportunities for communities to get engaged in design, implementation, and maintenance of potential improvements where applicable
6. sharing how input was used in selection of the preferred solution
7. confirming that those most affected by the decision understand the decision-making process and preferred solution before it is implemented

A suggested meeting plan document is included in **Appendix B**.

FOLLOW-UP: Following the Zone meeting and selection of the preferred solution, notice should be provided to explain how public input influenced the decision. This can be provided by email update to the list of meeting participants, by flier to those directly affected or both. Notice should include a summary of the input received, a description of the preferred solution, and an estimated implementation timeframe. Once these details are confirmed, they should also be posted on the website.

DOCUMENTATION: It is important to maintain documentation of the public engagement process from zone notification through implementation. This helps ensure the program team has documentation of notice provided, public input, how that input was used in the process and any conflicts or concerns that arose and were addressed throughout.

Documentation should include:

- copies of all materials distributed to the public, along with their distribution dates,
- this includes notification, meeting invitation, meeting materials, meeting follow-up and implementation notice.
- a map detailing the notification area, zone(s) and community council(s),
- a spreadsheet or table of meeting participants, including name and email address or phone number at minimum,
- meeting minutes including a general summary of public comments,
- documentation of any other public input or comment received outside the zone meeting by the Livable Streets Program team or other SLC representatives

Documentation should be compiled at the completion of each implementation or annually and included in program reporting as an appendix.



