Wasatch Choice 2050 Update

March 16, 2017

WASATCH FRONT REGIONAL COUNCIL

Scenario Workshops #2

Meetings:

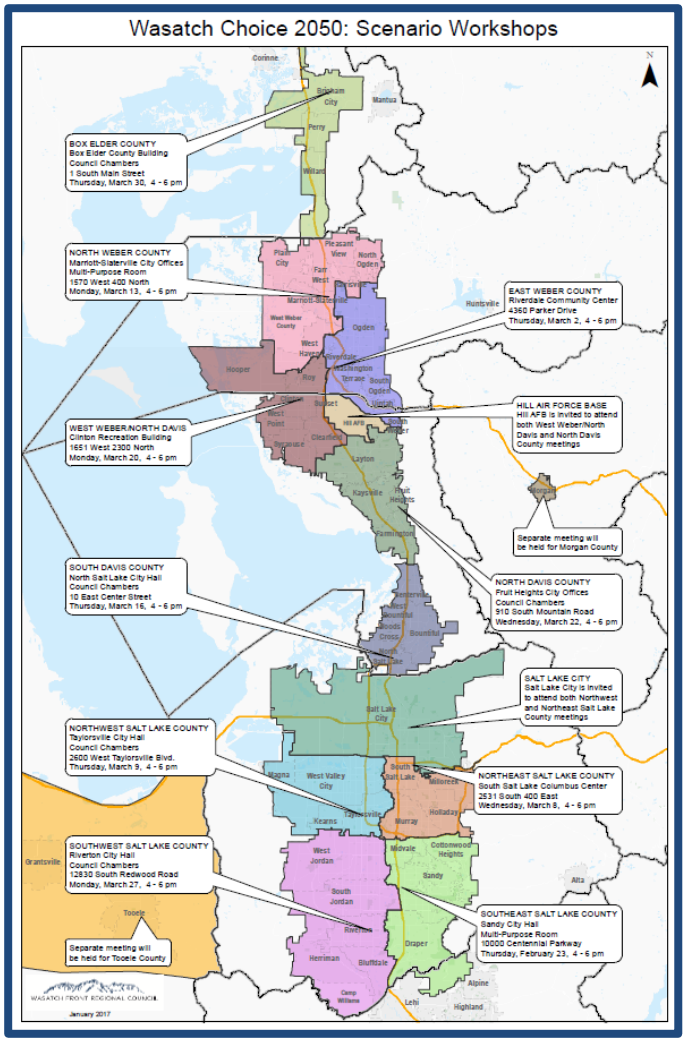
- February and March
- 6 meetings in the Ogden – Layton Urbanized Area
- 4 meetings in the Salt Lake City – West Valley City Urbanized Area

Invitees:

- Mayors / Elected Officials
- City Managers
- Planners
- Engineers
- Economic Development Directors
- City Councils and Planning Commissions Members
- UDOT, UTA, and Envision Utah

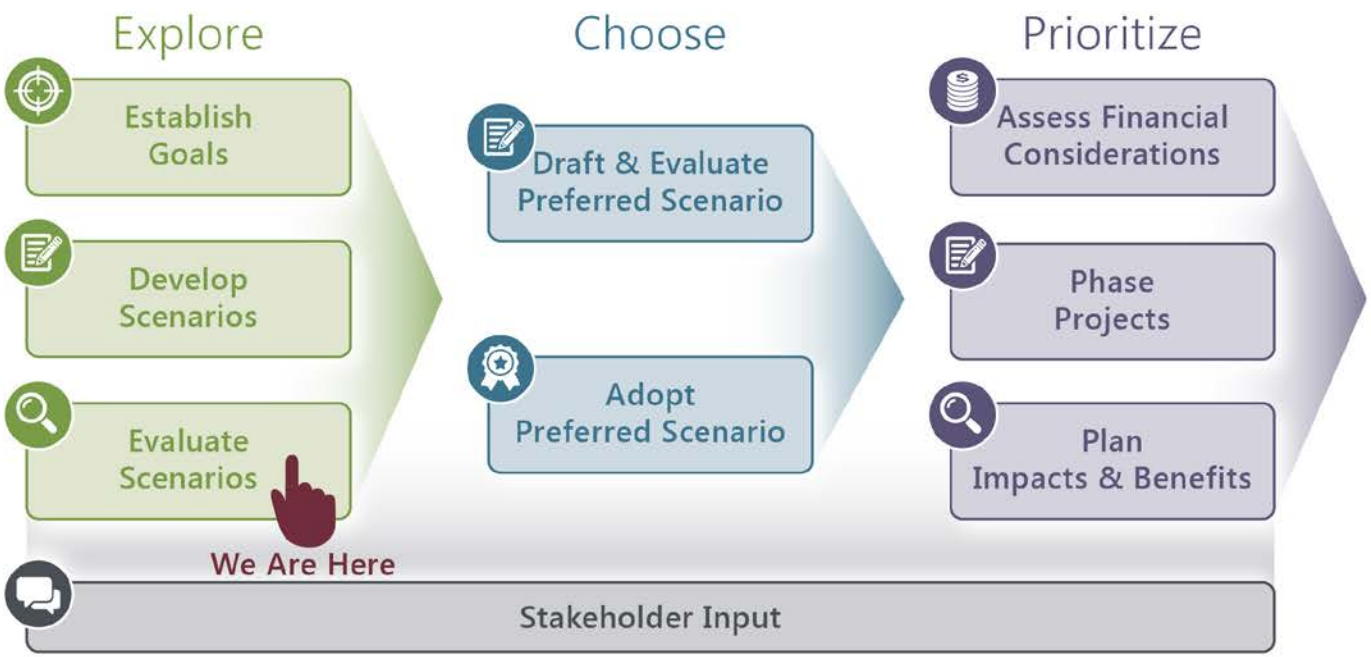
Purpose:

- Review Three Scenarios and provide input on Land use and Transportation



WASATCH FRONT REGIONAL COUNCIL

WASATCH CHOICE 2050



REGIONAL TRANSPORTATION PLAN

2019 - 2050

The Regional Transportation Plan is an element of

WASATCH CHOICE 2050

Application of access-to-opportunity in decision-making

Regional Growth Committee

March 16, 2017

WASATCH FRONT REGIONAL COUNCIL

Wasatch Choice 2050 Goals

Livable and healthy communities

Access to economic and educational opportunities

Manageable and reliable traffic conditions

Quality transportation choices

Safe, user friendly streets

Clean air

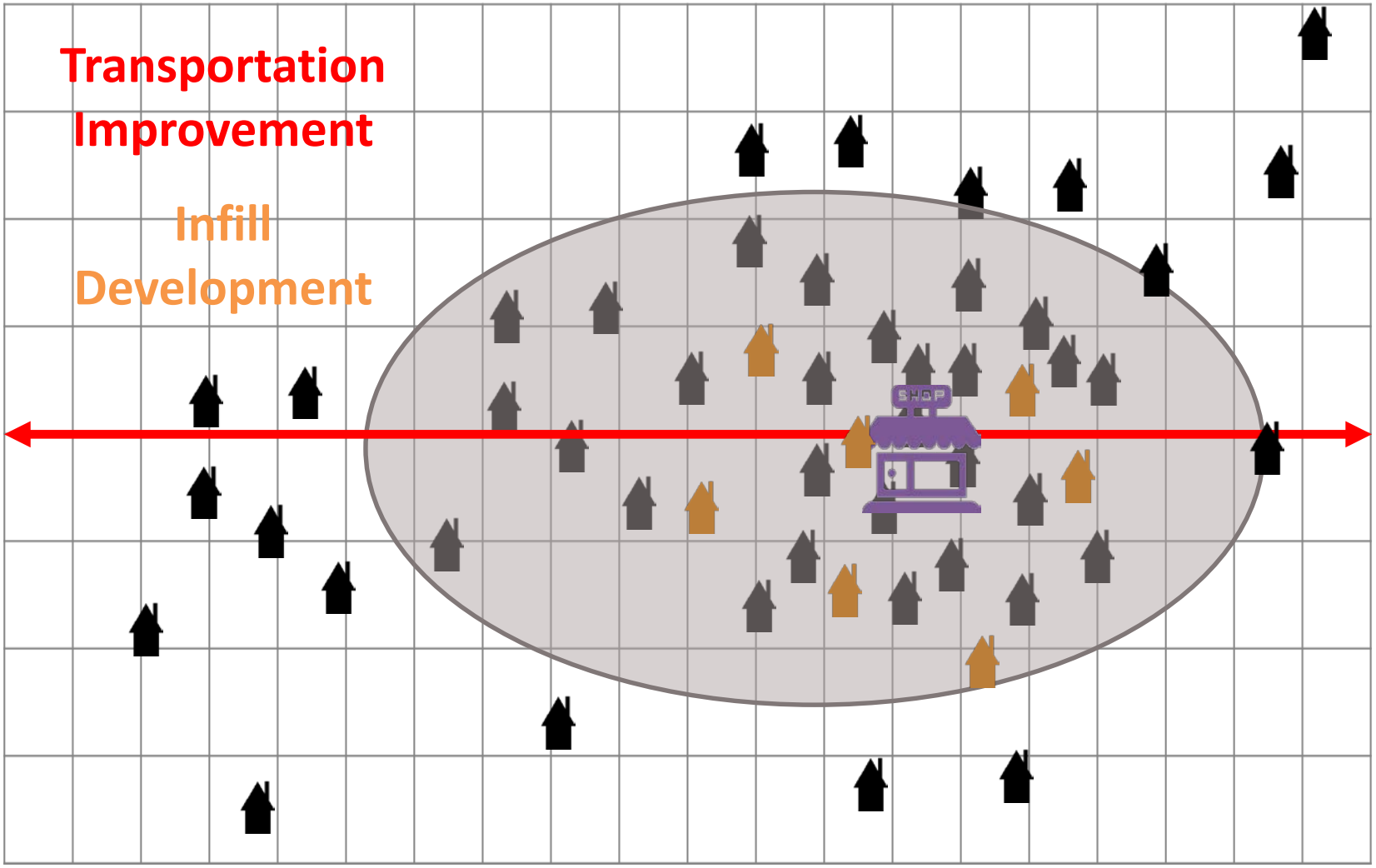
Housing choices and affordable living expenses

Fiscally responsible communities and infrastructure

Sustainable environment, including water, agricultural, and other natural resources

Ample parks, open spaces, and recreational opportunities

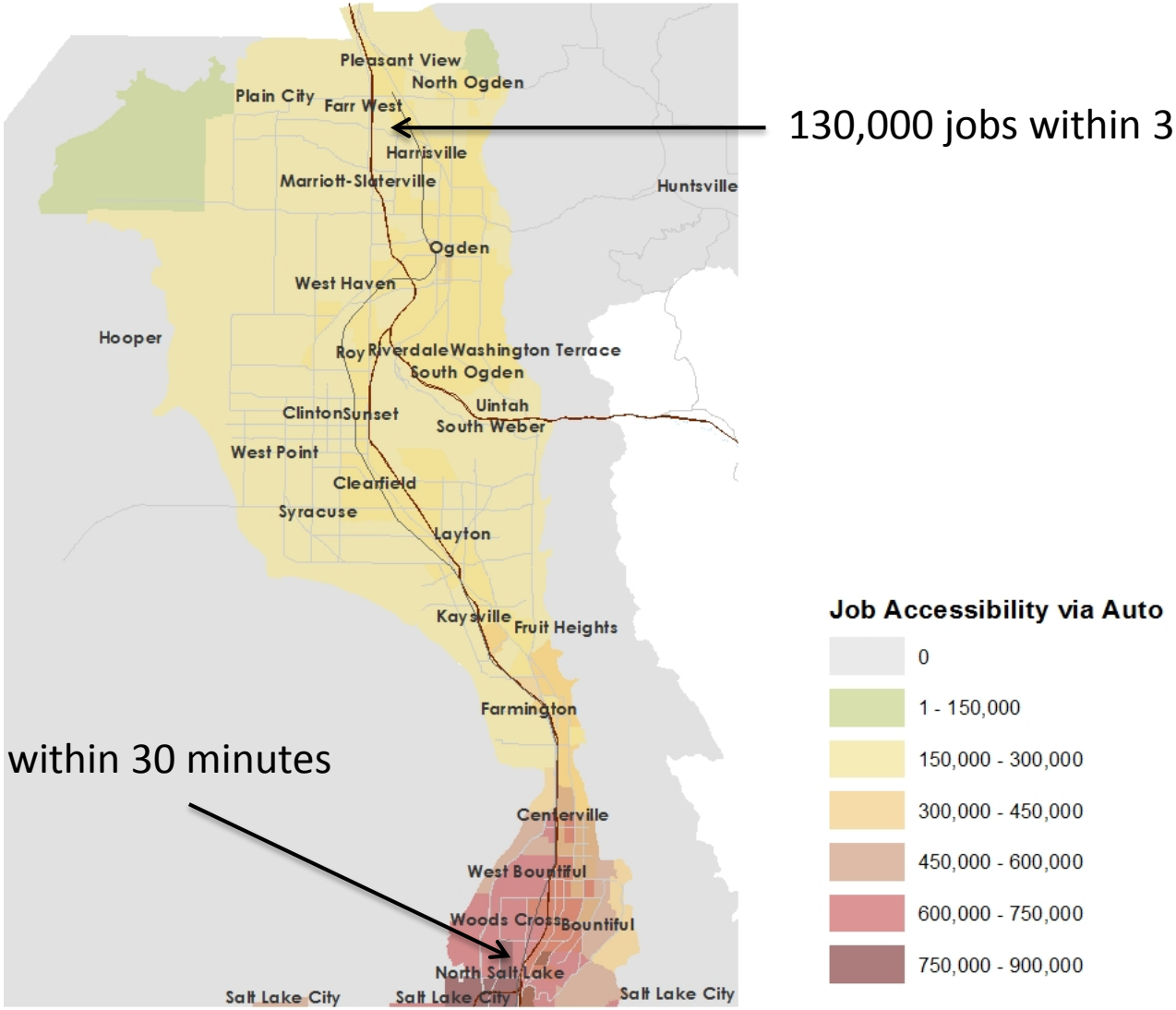
Improving access to opportunity



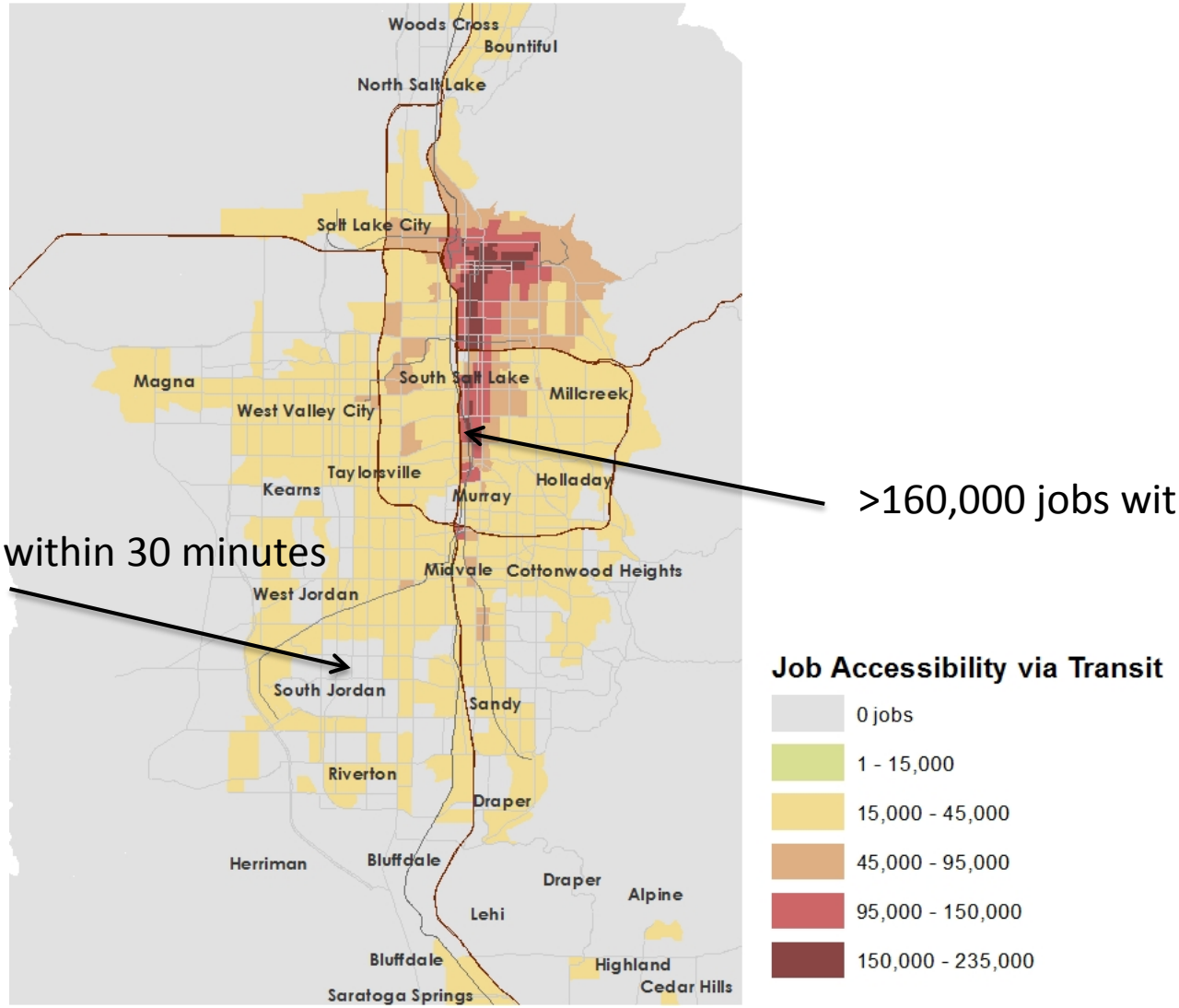
Analyzing Access

130,000 jobs within 30 minutes

>760,000 jobs within 30 minutes



Analyzing Access: by Transit



>160,000 jobs within 30 minutes

< 15,000 jobs within 30 minutes

Access to Opportunity helps answer *"Where?"*

Transportation:

Where would another lane help people get to more jobs?

Housing:

Which TODs are the most effective?

Business recruitment:

Where should we recruit firms in order to improve access to labor?

Initiatives relevant to Access to Opportunity

Scale	Initiative	Participants	Primary Issue	Secondary
State	Transportation Governance and Funding Task Force	Legislature, public private	Transportation	Land use, ED
State	Utah's Unified Transportation Plan	WFRC/MPOs, UDOT, UTA	Transportation	Land use, ED
Region	Regional Transportation Plan, Wasatch Choice 2050	WFRC, UDOT, UTA, Cities and Counties	Transportation	Land use, ED
County	Partnership for a Greater Salt Lake	Salt Lake County, public & private	ED, transportation, land use	
County	Weber County TLC Template	Weber County and Cities	ED, transportation, land use	
Local	Local planning, TLC	Cities & Counties	Land use, transportation, ED	

Regional Development Example Outcomes

- **Outcome 2:** *Local jurisdictions adopt a balanced approach to mixed-use development -- supporting access to public transportation and employment opportunities.*

  Indicators:

  – *# of compact housing, commercial, retail & services development in centers or near transit*

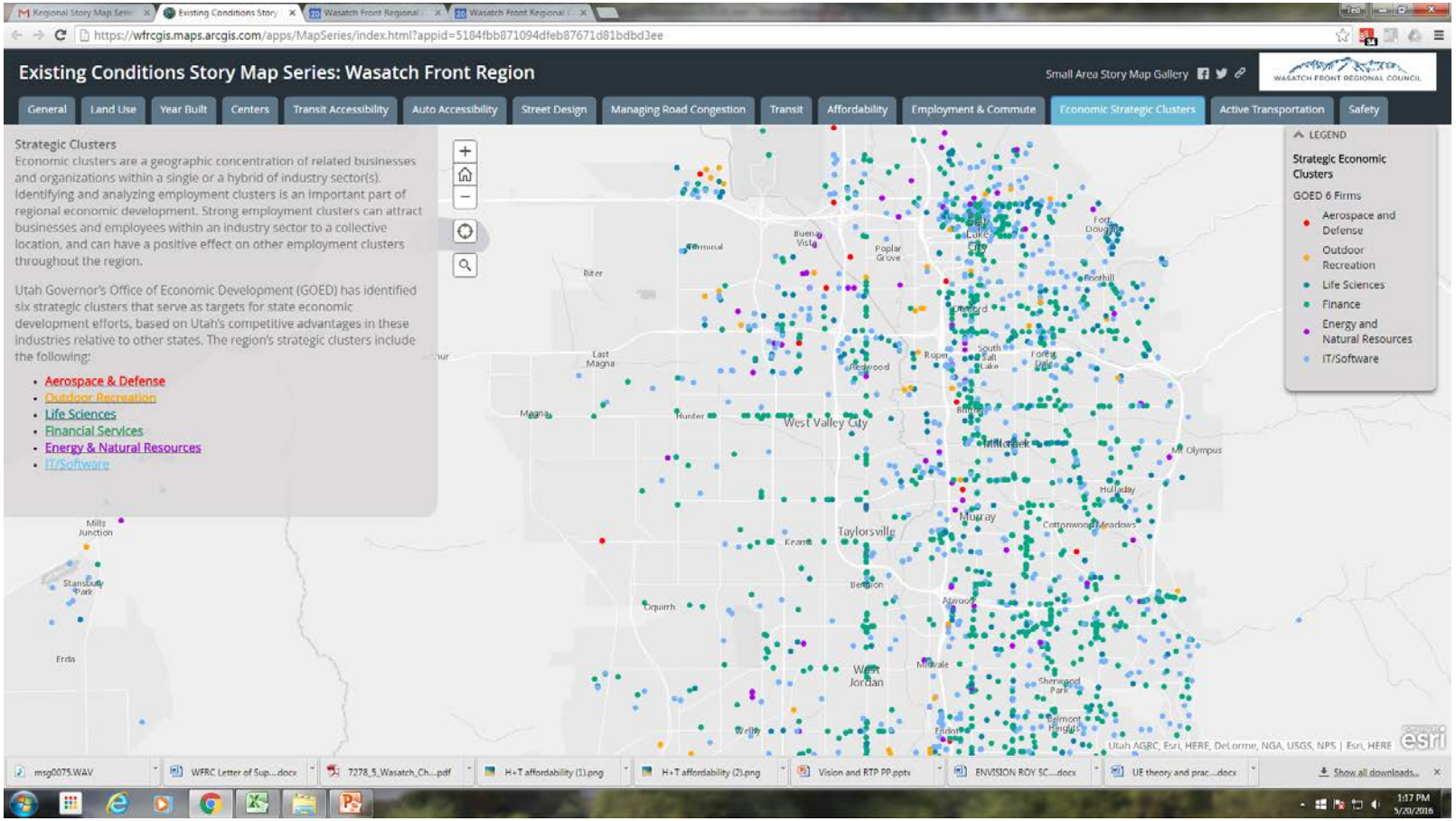
- **Outcome 8:** *Region-wide transportation planning efforts contribute to households having access to jobs and housing options.*

  Indicators:

  – Proximity of jobs, housing, & services within 30 minutes of travel time* by mode
  *Review indicator on regional & sub-regional level

Industry Clusters

- Aerospace and Defense
- Natural Resources and Energy
- Financial Services
- IT and Software
- Life Sciences
- Outdoor Recreation



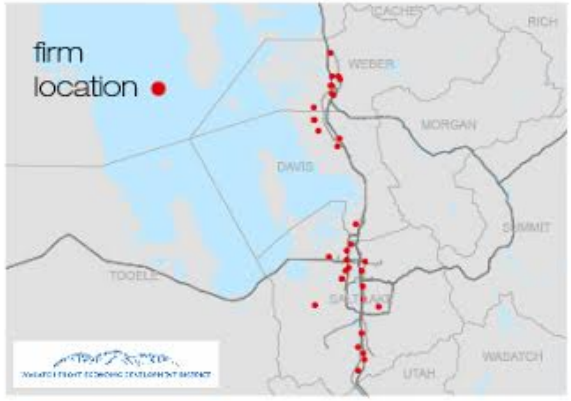
AEROSPACE AND DEFENSE CLUSTER

total firm count: 34 | total employees: 3776

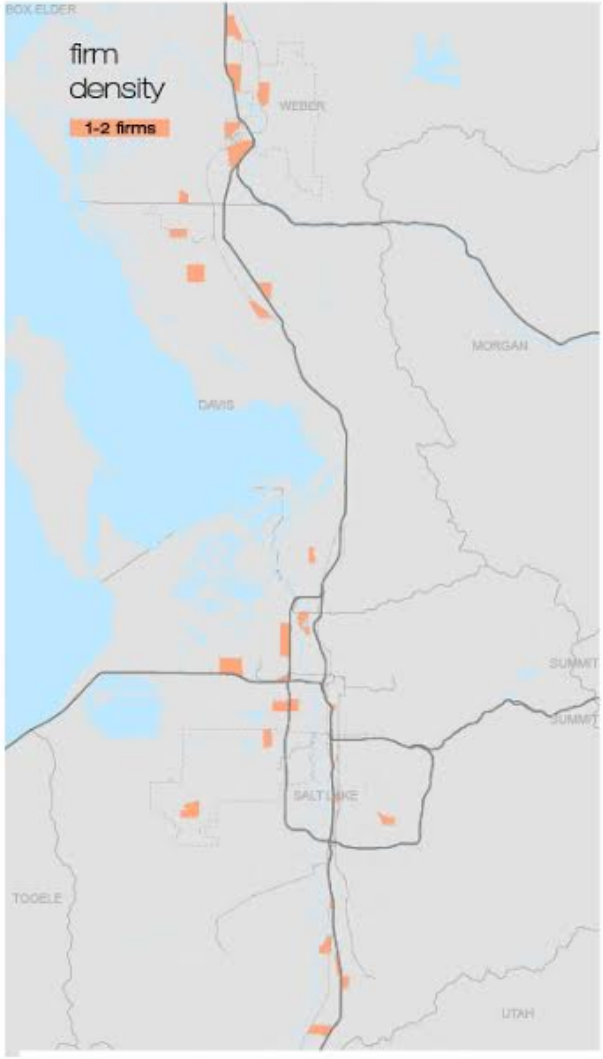
most firm clustering:
-Clinton City
-Ogden City
-West Valley City

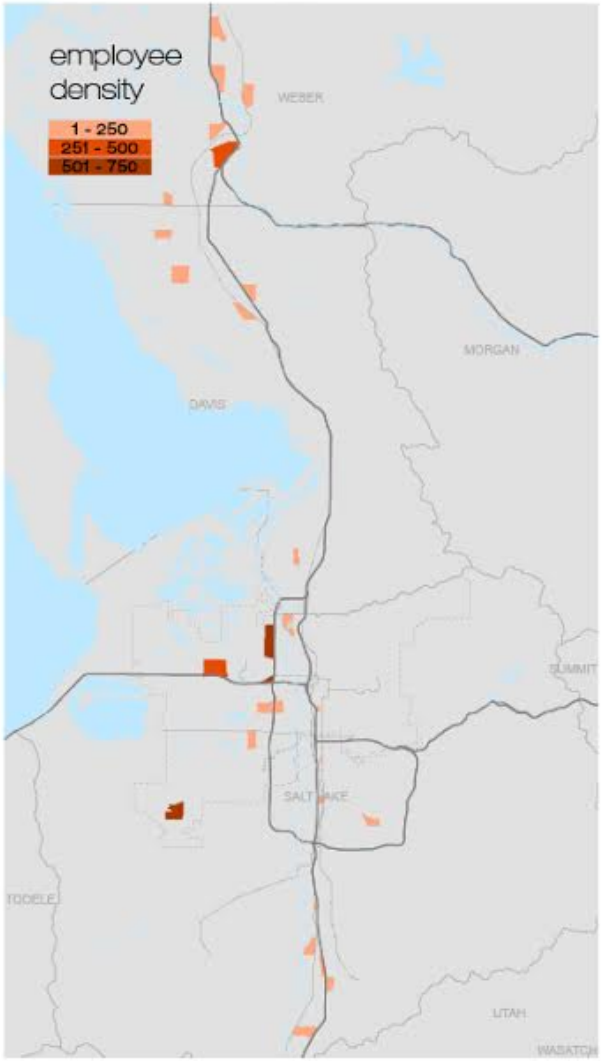
city with most firms:
-Salt Lake City: 8 firms
-Ogden City: 6 firms
-West Valley City: 3 firms

city with most employees:
-Salt Lake City: 1665 employees
-West Valley City: 886 employees
-Ogden City: 732 employees



INDUSTRY RELATIONSHIP WITH WASATCH FRONT RAIL SYSTEM





Application of access-to-opportunity in decision-making

Regional Growth Committee

March 16, 2017

WASATCH FRONT REGIONAL COUNCIL

Utah Street Connectivity Guide

Regional Growth Committee

March 15, 2017

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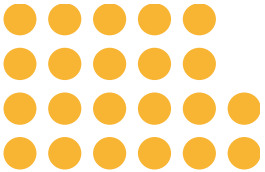
What is Street Connectivity?

Connectivity is…**multiple routes** and connections serving the same origins and destinations

What Utahns Want

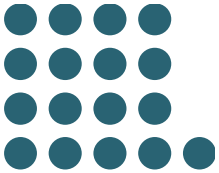


23%

Improving how convenient it is to get around without a car

22%

Limiting traffic congestion



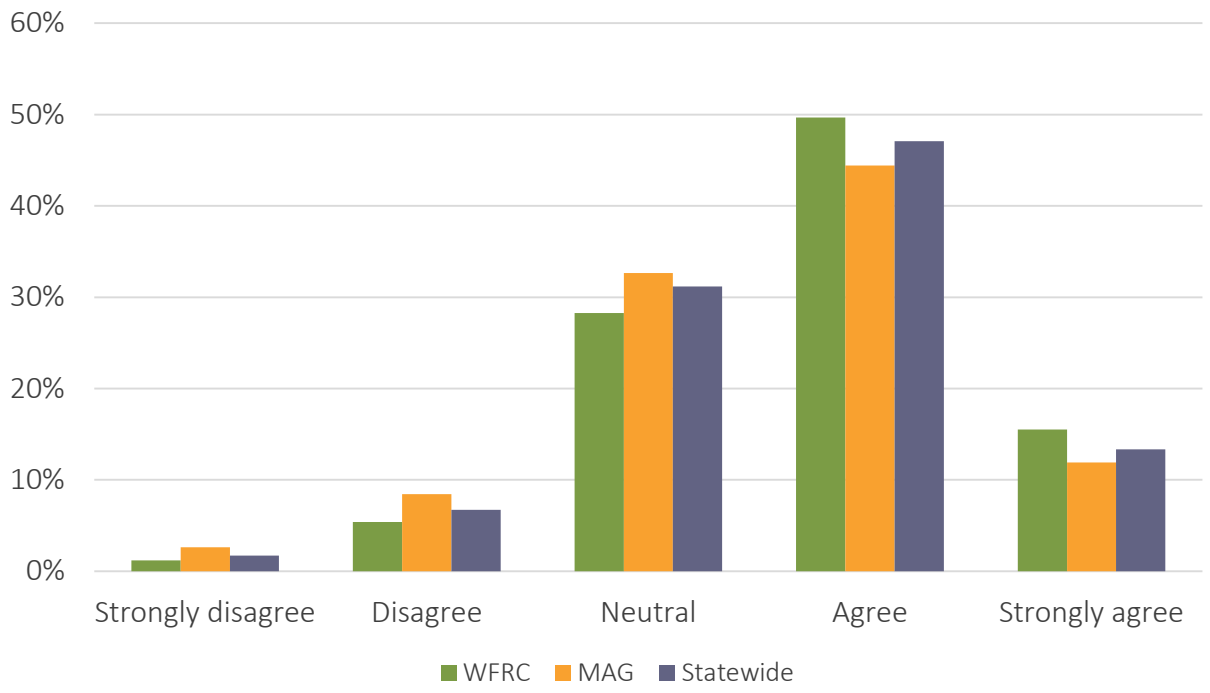
18%

Making sure daily services and amenities are close to where people live

Source: Envision Utah

What Utahns Want

a top transportation priority should be to improve the connectivity of streets and sidewalks for shorter distance trips



Source: Utah Statewide Household Travel Survey

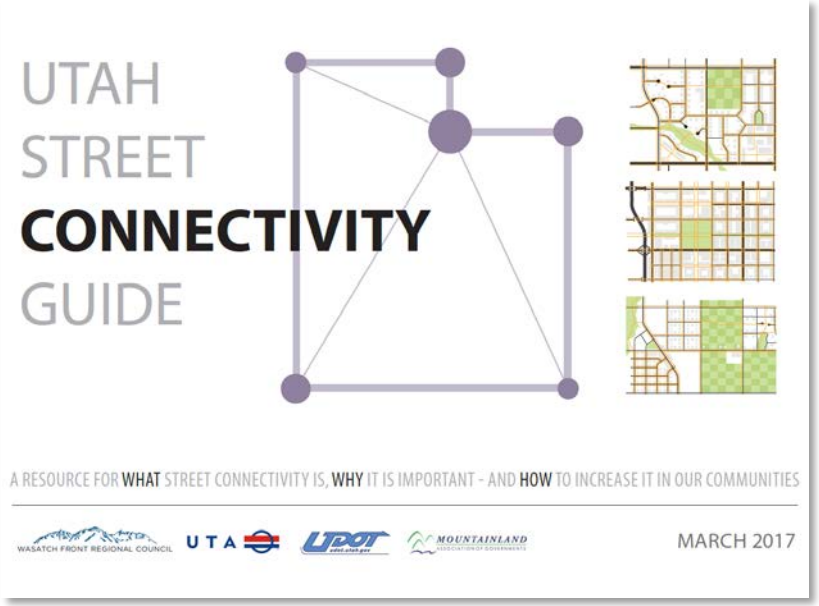
The Guide

Project Background

UTAH STREET CONNECTIVITY STUDY

- Define benefits of street connectivity
- Inform decision makers
- Provide guidelines for implementation

Utah Street Connectivity Guide



- » The Case for Connectivity
- » Tools for Connectivity
- » Design Guide and Case Studies

Utah Street Connectivity Guide

WHY is connectivity important?

A highly-connected street network – one where a dense set of intersections each connect to several streets, that connects a community to its key destinations, and is walkable – provides a multitude of benefits for Utah communities.

Regional and community mobility

Good street connectivity redistributes traffic among different routes in a network, providing more options and better accessibility for local traffic. This in turn frees some of the capacity on the adjacent arterial roads, which are mostly used by the non-local traffic.

Transportation choice

Higher street connectivity provides travelers with greater choice of travel modes. In a well-connected network, active transportation modes and transit become more viable choices. This means that these types of networks are less automobile-dependent.

Safety

In recent years, many studies have focused on how built environment factors (such as street connectivity and community) affect physical activity and health.

Infrastructure and growth management

Higher street connectivity improves the investment in municipal infrastructure, such as utilities, and services, such as fire and emergency services.

Health

Street connectivity has been shown to offer indirect benefits related to health, largely stemming from the health effects of increased physical activity.

Economic vitality

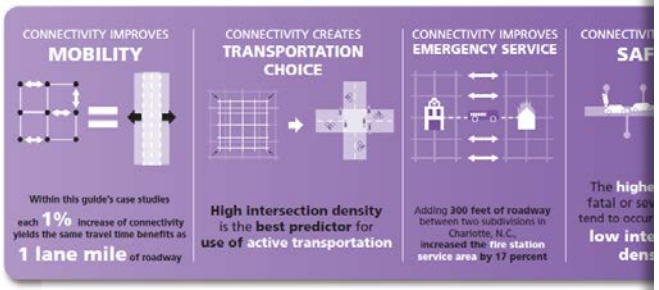
Increasing street connectivity h
economic vitality. Many of the b
fiscal well-being of households

Environment

Street connectivity has major i
and active transportation mode
usage of automobiles which red

Community access

At a regional or community-wid
bottlenecks and reduce distanc
neighborhood scale, where con
shopping area within walking o

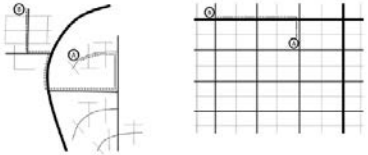


Utah Street Connectivity Guide

WHAT is connectivity?

Street connectivity is a simple idea – providing a network of public streets whose intersections allow for easy movement around it. However, this simple idea is more difficult to define.

Look at the two images below. The images show two street networks, and they are clearly different. But why are they different?



These two networks differ in many ways. The network on the left has fewer four-way intersections than the one on the right, and less of a grid pattern. It has larger, and less-defined blocks. It has fewer places to access a major street. It requires a longer path to get from Point A to Point B.

These differences all represent key aspects of street connectivity. The project team developed a working definition of street connectivity that has four aspects, two of them more general and "basic" and two others more specific and "advanced."

The relative level of connection. The most basic aspect of street connectivity is the degree to which streets are connected to one another at each intersection. In the example below, the Downtown Salt Lake City grid has a higher level of connection because of its consistently 4-way intersections, while the eastern Salt Lake City example has mostly 3-way intersections and cul-de-sacs.

Downtown Salt Lake street grid

800'

East Salt Lake street grid

800'

Network density. To consider network density, take the very connected network in downtown Salt Lake City and compare it to Salt Lake City's Avenues neighborhood. Because both are nearly perfect grids, have the same relative level of connection. However, the network in the Avenues is noticeably different, and more connected. This is due to their network density. With its 330-foot blocks, the Avenues has much higher network density than Salt Lake City, with its 660-foot blocks.

Downtown Salt Lake street grid

800'

Avenues neighborhood street grid

800'

Ability to connect to specific destinations. This aspect addresses the problem that all destinations along a network are not equally popular – and, therefore, are not equally valuable for a network to connect to. An elementary school receives more trips along a network than a single family home, for example. So it is important to understand how well a given network connects the community to these specific points along it. Often improving access to key destinations such as schools is the most effective way a built-out community can improve its connectivity.

Quality of the network for all users – walkability. Each street offers a different environment for all the transportation modes – private vehicles, public transit, freight, bicycling, and walking. Among these, it is particularly important to pay attention to the conditions for walking. Pedestrians are the most vulnerable users of the network, and everyone is a pedestrian at some point during their trip. The pedestrian environment is critical for transit access. Walkability- how well a street provides infrastructure for walking- is a key aspect of street connectivity.

Utah Street Connectivity Guide

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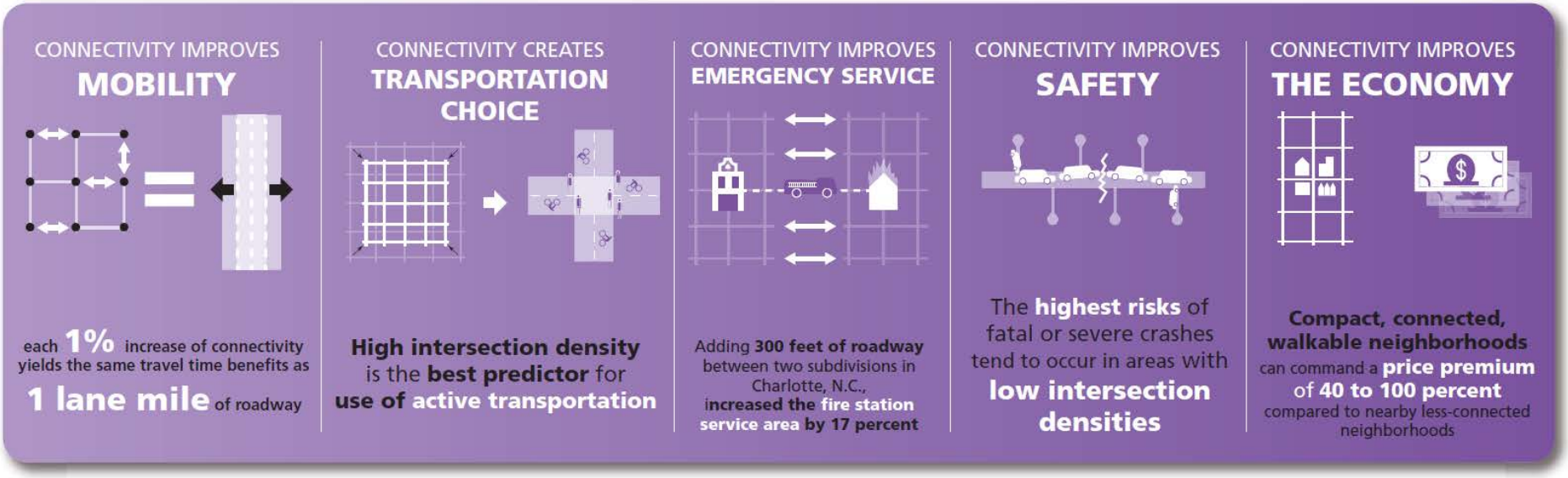
Why Improve Connectivity?



Utah Street Connectivity Guide

Contexts for street connectivity

Streets inhabit and serve different types of communities. These differences – whether in land uses, population density, levels of activity, demographics, the effect of natural systems, and other factors – create circumstances where the specifics of how a street network should interact with its surroundings are different.

This is the reason why this guide offers context-specific guidance for street connectivity – street connectivity cannot be a one-size-fits-all directive. We define these contexts both by scale – whether a region, city, or neighborhood. We also define them by land use type – whether residential, non-residential, mixed use, as well as how intense the use is. These differences have produced three levels of connectivity types, each with one to six sub-types addressing land use characteristics.

These contexts are for the help of the user – it is up to you, the user of the guide, to choose which context applies to your community.

It is important to note that good overall street connectivity depends on strong street connectivity for **all** scales. Regional, community and neighborhood/district street connectivity all reinforce one another.

3.1.1 Regional-scale connectivity

Regional-scale connectivity is street connectivity for travelers making trips across the region. Trips across the region are usually those over city borders. The most typical kind of regional trip is the work commute, but these trips are also made for social visits, recreation, and shopping.

Areas in which to analyze regional-scale connectivity are groups of different cities or communities that contain regional-level trips. An example of this kind of area could be the entire Wasatch Front, but could also be a sub-area such as Salt Lake County, or the area covered by one of the Metropolitan Planning Organizations (MPOs) such as the Dixie MPO.

Regional-scale connectivity considers only those streets typically used by regional travelers – for this guide, these are defined as arterial and above level streets and roadways.

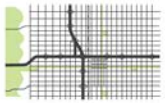
Utah Street Connectivity Guide

Community-scale connectivity

Community-scale connectivity is street connectivity within the borders of a local jurisdiction, most commonly a city. This guide defines three types of communities:

Urban: An urban community is a city or other local jurisdiction with:

- Higher overall density
- A high degree of intersecting regional transportation facilities and regional destinations
- A high degree of land use mix



Suburban: A suburban community is a city or other local jurisdiction with:

- Medium overall density
- Fewer regional transportation

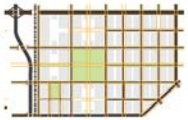
Neighborhood and district connectivity

Neighborhood and district-scale connectivity is street connectivity within a neighborhood or district of common community character. These areas can range in size – as small as a single subdivision to as large as a several square mile subsection of a city.

This guide defines six types of neighborhoods/districts:

Urban residential neighborhood: An urban residential neighborhood is a higher-density residential area with a mix of civic, commercial, and office uses.

Downtown district: A mixed-use center of activity that attracts people from throughout the community and sometimes the region.

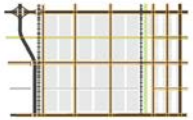


Suburban residential neighborhood: A lower-density residential area with other types of uses typically found on nearby arterial or collector corridors.

Campus district: A large land use such as an educational campus, shopping center, business park, or entertainment/lifestyle center.

Rural residential neighborhood: A very low density residential area with agricultural or natural space and few other uses present.

Industrial district: An area focused on production or distribution activities.



Neighborhood and district-scale connectivity considers all streets.

Utah Street Connectivity Guide

Metrics and street connectivity contexts

The Utah Street Connectivity Guide's street connectivity metrics apply to all of the street connectivity contexts, but they are measured differently depending on the scale, and the specific context type determines the standard for each metric. For example, an urban neighborhood has much higher standards for the connectivity index and intersection density than a rural neighborhood.

The following table provide a summary of how each metric applies to each street connectivity context type:

	CONTEXT-BASED STANDARDS for CONNECTIVITY METRICS			
TYPOLOGY	*Relative level of connection*	*Network density*	*Ability to connect to destinations*	*Quality for all users (walkability)*
Regional typology	Connectivity index of arterial and above-level streets	Arterial or above intersections per square mile	Average travel-shed percentage for key destinations	Accessibility index for walking half mile from set of community destinations
Region	2	1	100 percent	100 percent
		tor or above ons per square mile	Average travel-shed percentage for key destinations	Accessibility index for walking half mile from set of community destinations
			100 percent	100 percent
			100 percent	100 percent
			100 percent	100 percent
		tions per mile	Average travel-shed percentage for key destinations	Average of highest 5 pedestrian blocks (spacing between pedestrian links)
			100 percent	Maximum 500 feet
			100 percent	Maximum 1000 feet
			100 percent	Maximum 1500 feet
			100 percent	Maximum 350 feet
			100 percent	Maximum 500 feet
			100 percent	Maximum 1500 feet

te surrounding collector/arterial streets along the area boundary, if applicable.

Utah Street Connectivity Guide

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Case Studies

3.3 Street Connectivity Design Guide and Case Study Results

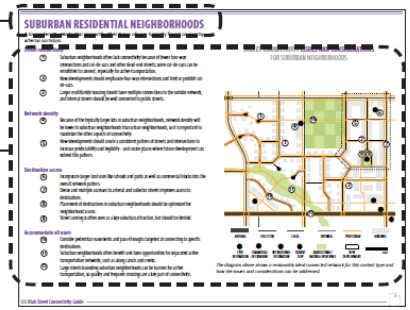
This section illustrates how you, the user, can put together the information in this guide to improve street connectivity in your community. The guidance in this section is based on the different community contexts. Each context type contains a section that provides a set of considerations that may apply in your type of environment and the set of standards for each of the four metrics to measure street connectivity.

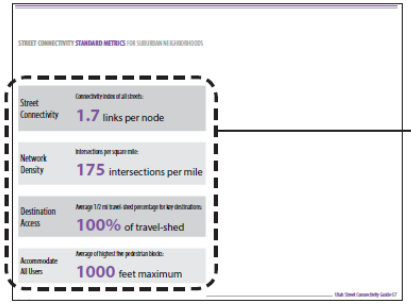
Meanwhile, each case study results page contains an explanation of the area; the evaluation of the area's connectivity according to the Utah Street Connectivity Guide metrics in Section 2.1; suggested potential strategies according to the four types of strategies identified in Section 2.2; a map showing how the suggested strategies might look; and a re-evaluation of the metrics with the strategies incorporated. For the three community-scale case studies a summary of the benefits modeling is included. An example is below:

CONTEXT TYPE GUIDANCE

Name of the context type

Connectivity guidelines and considerations for the context type





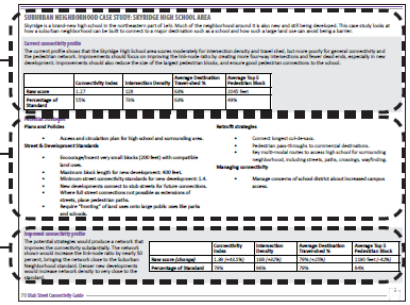
Standards for the four metrics for the context type

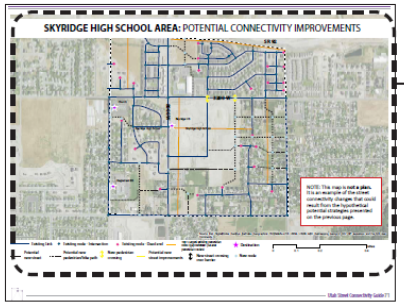
CASE STUDY FOR CONTEXT TYPE

Description of the case study area and existing connectivity evaluation

Suggested connectivity improvements

Evaluation of improvements on metrics

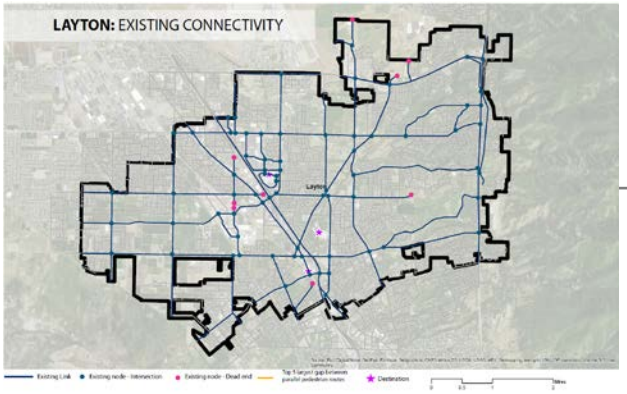


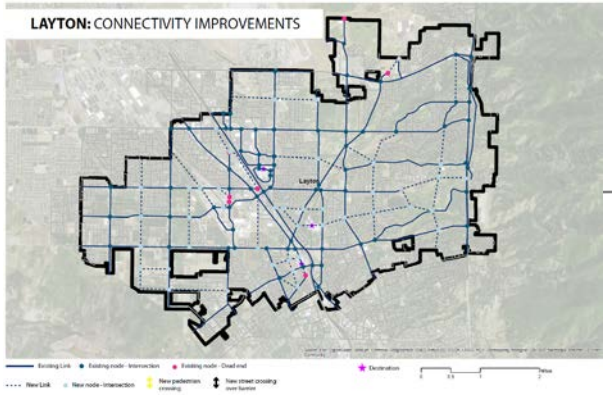


Map of what suggested improvements might look like. *NOTE: This is not a plan, only hypothetical.*

42 Utah Street Connectivity Guide

Case Studies



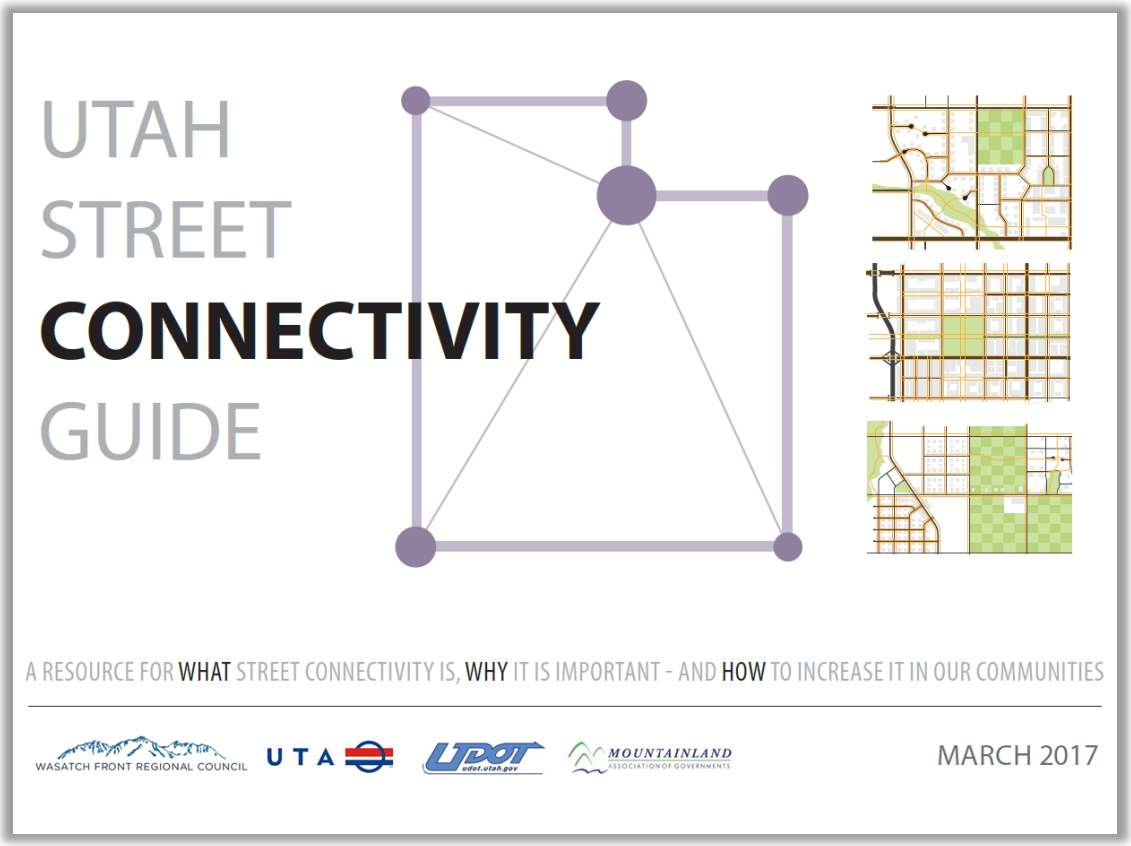


BENEFITS

Case Studies

- **Reduction in network travel times & delay** in urban & suburban communities
- **Shorter travel distances** in all cases
- More **balanced distribution** of traffic throughout networks
- **Lower delay & increased network capacity** with greater connectivity vs. widening
- **Increased rates** in bicycling and walking
- **Significant savings/benefits** due to increase in active transportation

Guide


UTAH
STREET
CONNECTIVITY
GUIDE
A RESOURCE FOR WHAT STREET CONNECTIVITY IS, WHY IT IS IMPORTANT - AND HOW TO INCREASE IT IN OUR COMMUNITIES
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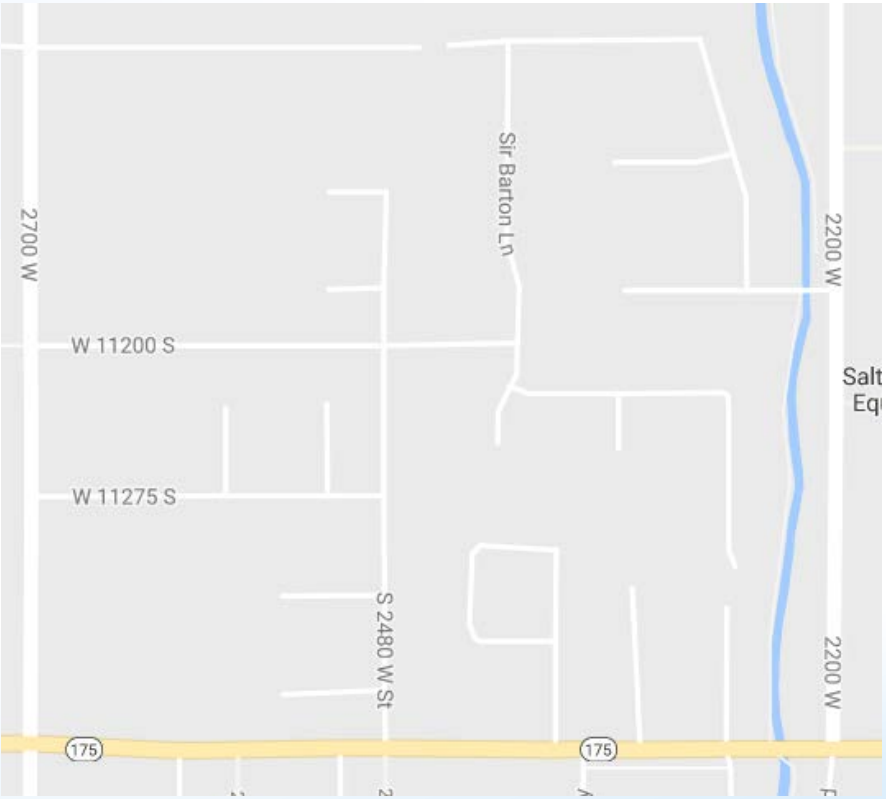
MARCH 2017

TRANSPORTATION
AND
LAND USE CONNECTION

wfrc.org/tlc

CONNECTIVITY



Quarter Mile

CONNECTIVITY IN LEHI

- Lehi City Council Adopted Street Connectivity Standards – April 2016
  - Concerns
  - Solutions
  - Determine Metrics
  - Lehi Connectivity Standards
  - New Development Example

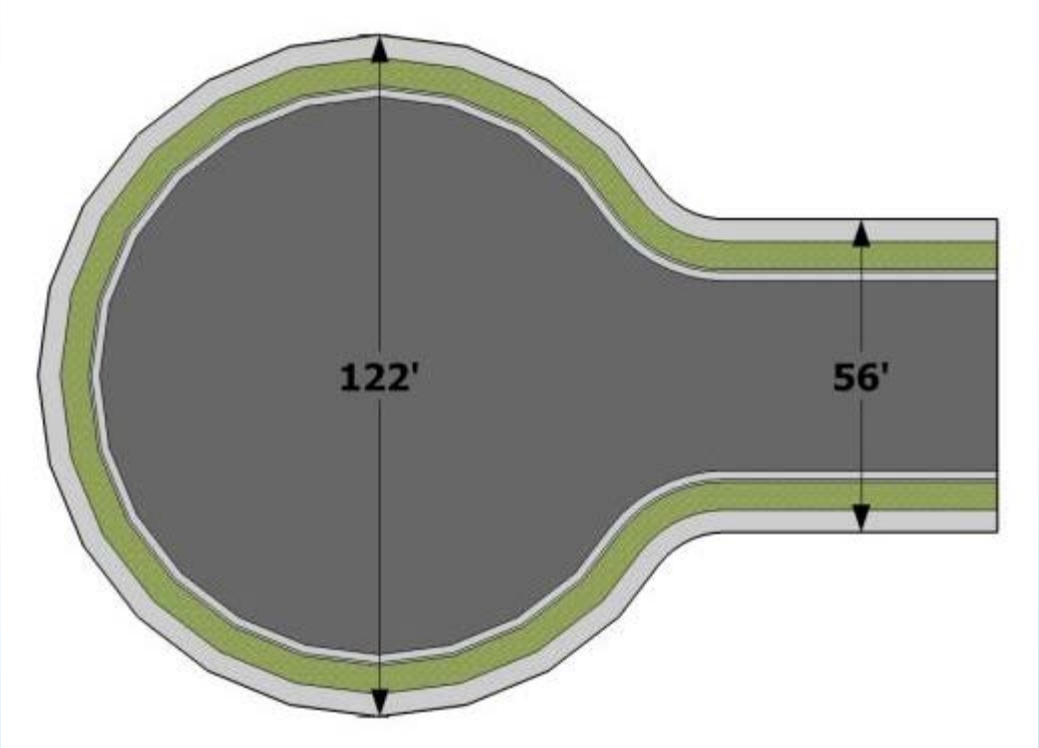
WASATCH CHOICE

CONCERNS

- City Staff → Maintenance/cost
- Appointed/Elected Officials → Maintenance/traffic
- Public → Traffic/privacy
- Development → Cost/decreased developable area

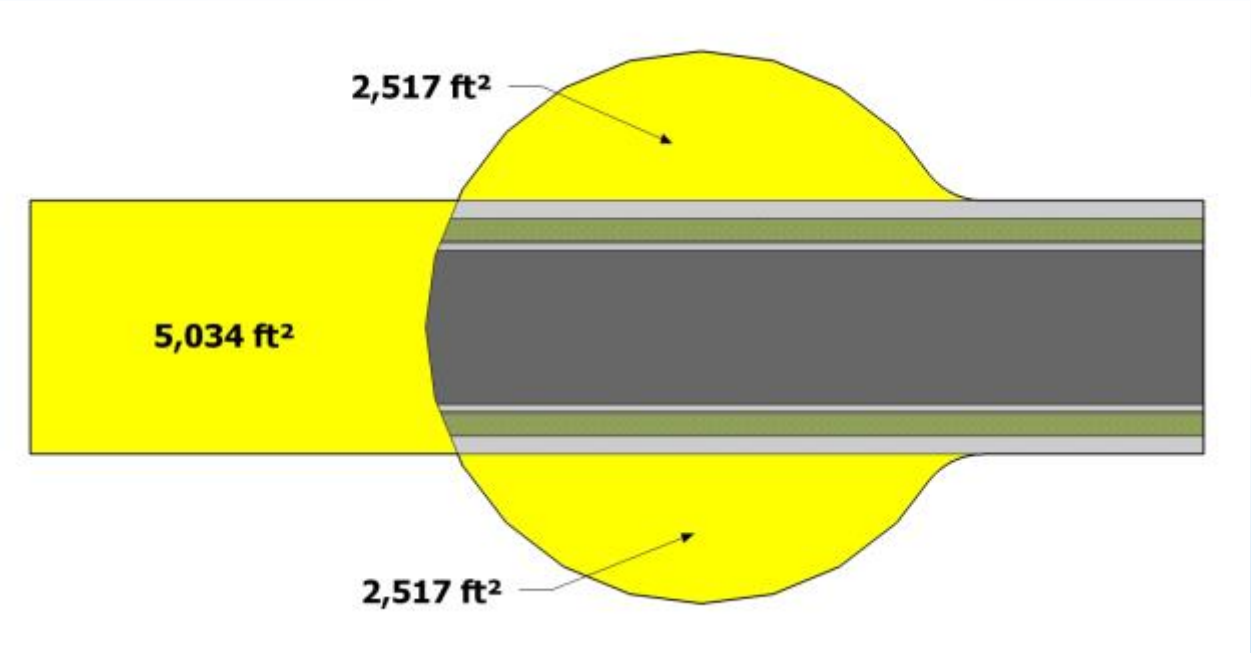
LEHI SOLUTIONS

- Standard Lehi Cul-de-sac



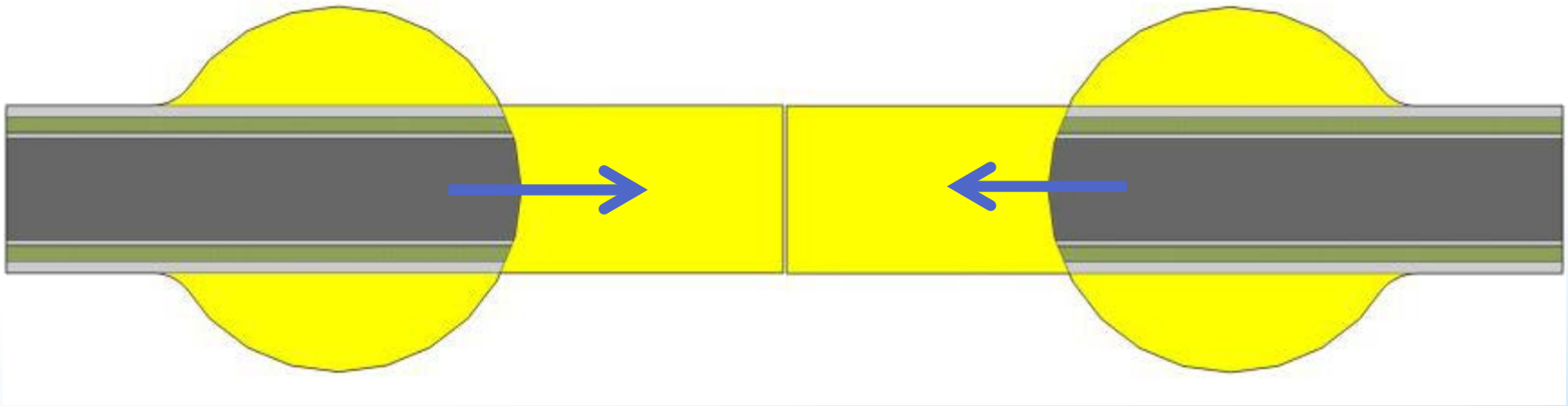
LEHI SOLUTIONS

- Cul-de-sac Stub Example



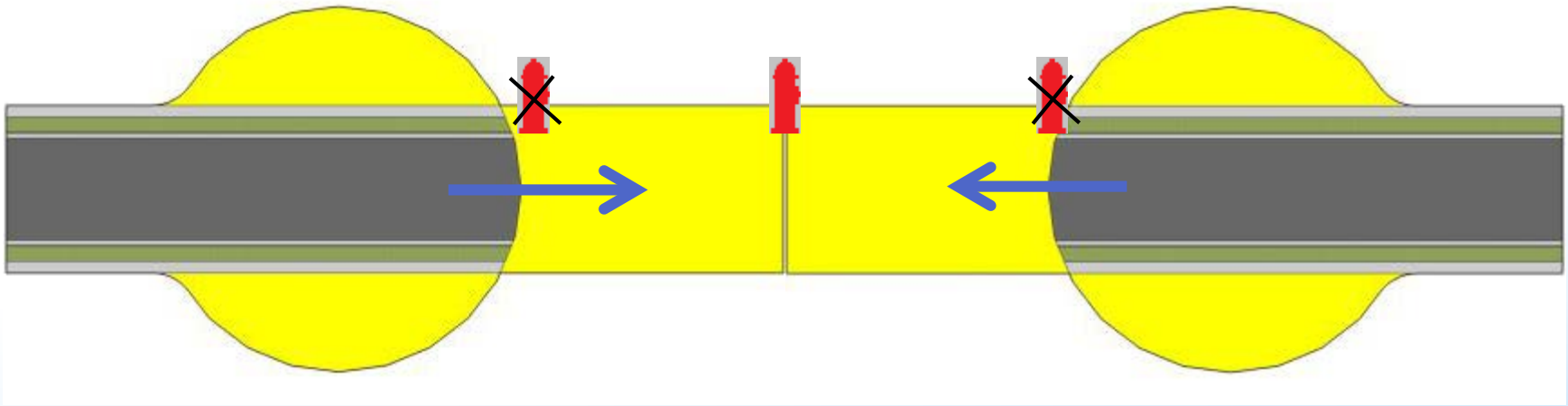
LEHI SOLUTIONS

- Cul-de-sac Connection

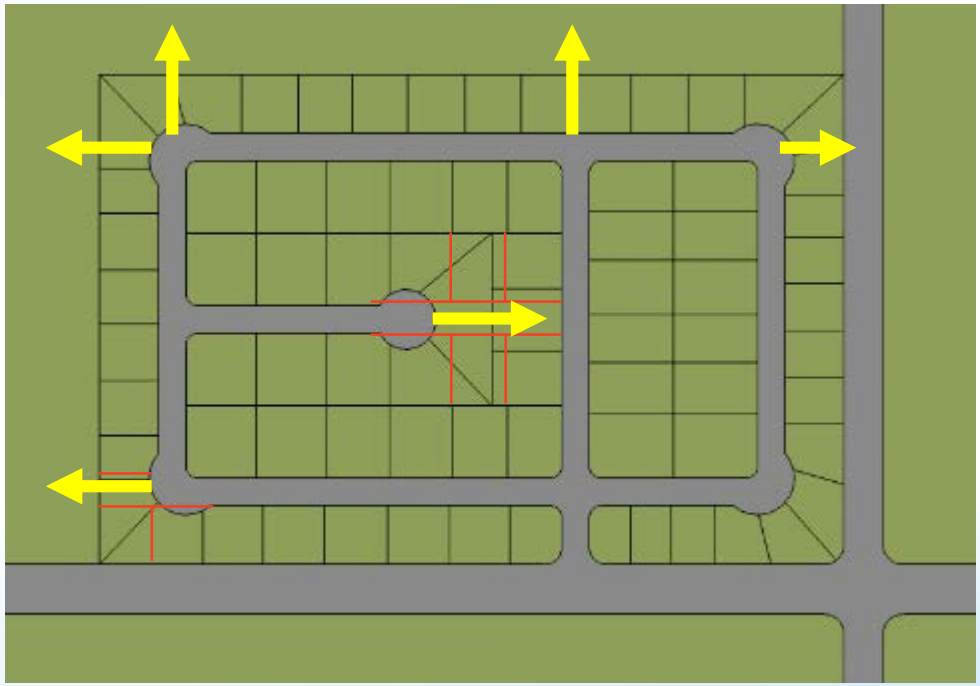


LEHI SOLUTIONS

- Potential infrastructure cost savings



LEHI SOLUTIONS



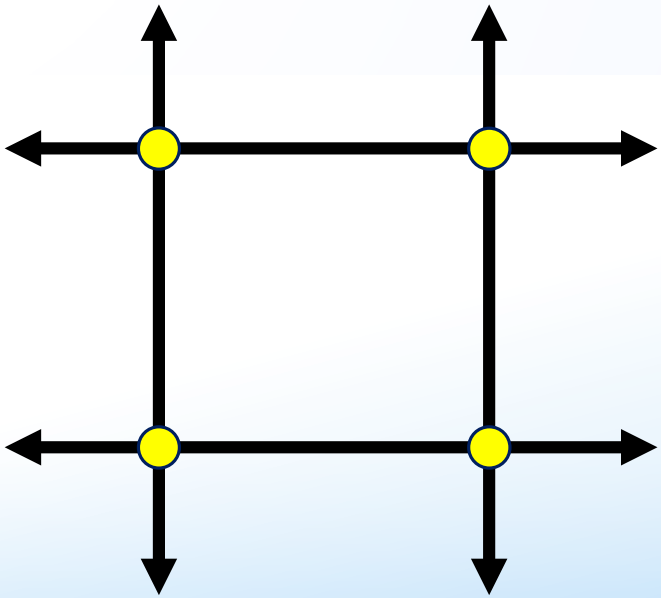
- New development solutions
  - Lot size flexibility
  - Potential density bonus

“WHAT IF” SOLUTION

- Detriments of existing layout
  - Maintenance
  - Emergency access
  - Delivery
  - Walkability

DETERMINE METRICS

- Lehi Ordinance
  - Connectivity index
  - Maximum block/cul-de-sac length
  - Credit for trail/pedestrian connections and street frontage along open space



Connectivity Index of 3

LEHI CONNECTIVITY STANDARDS

- Required Connectivity Index

Density	Minimum Index Score
0-2.5 DU/AC	1.5
2.6-4 DU/AC	1.6
4.1+ DU/AC	1.75

LEHI CONNECTIVITY STANDARDS

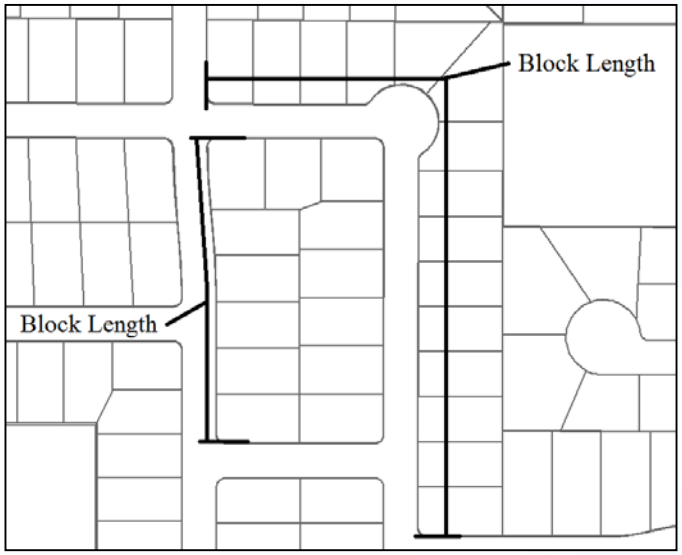
- External Connectivity Requirements

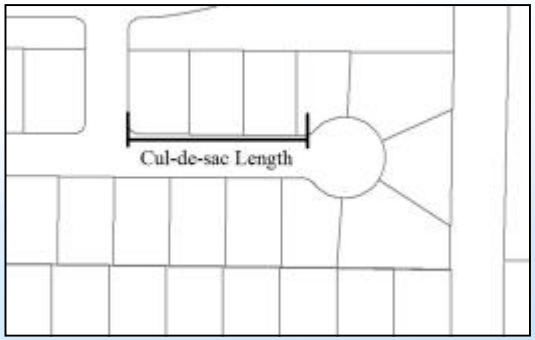
LEHI CONNECTIVITY STANDARDS

- Maximum block/cul-de-sac lengths

Density	Maximum Block Length
0-2.5 DU/AC	1,000 ft.
2.6-4 DU/AC	800 ft.
4.1+ DU/AC	600 ft.

Density	Maximum Cul-de-sac Length
0-2.5 DU/AC	400 ft.
2.6+ DU/AC	250 ft.
R-2, R-2.5, R-3	No Cul-de-sacs





LEHI CONNECTIVITY STANDARDS

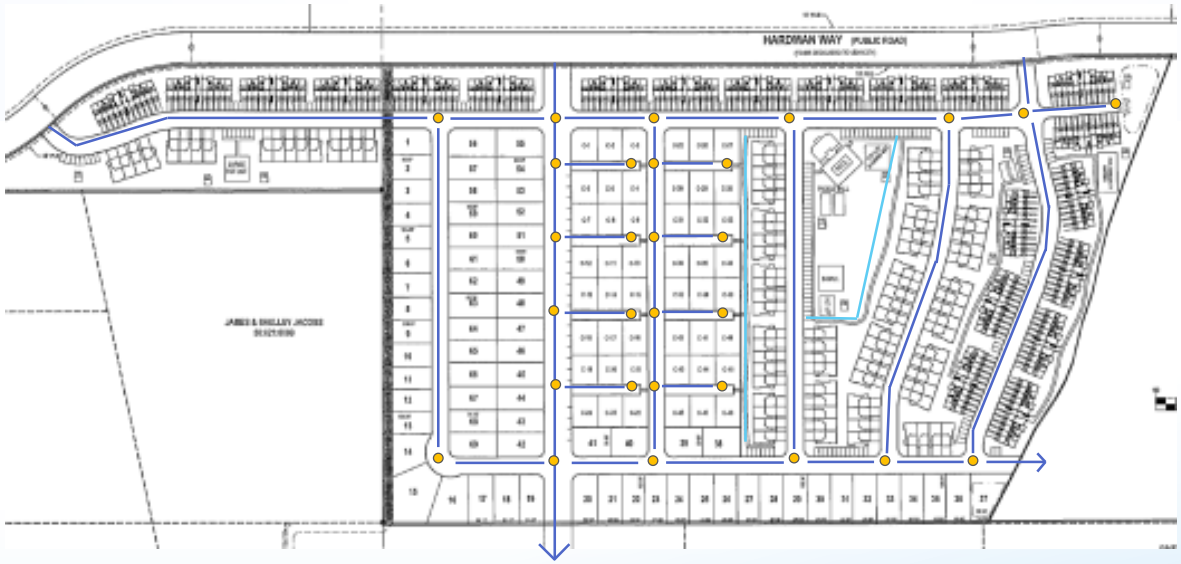
- Exceptions
  - Topography;
  - Natural features including lakes, rivers, designated wetlands;
  - Existing adjacent development;
  - Rail corridors;
  - Limited access roadways.

WASATCH CHOICE

NEW DEVELOPMENT EXAMPLE

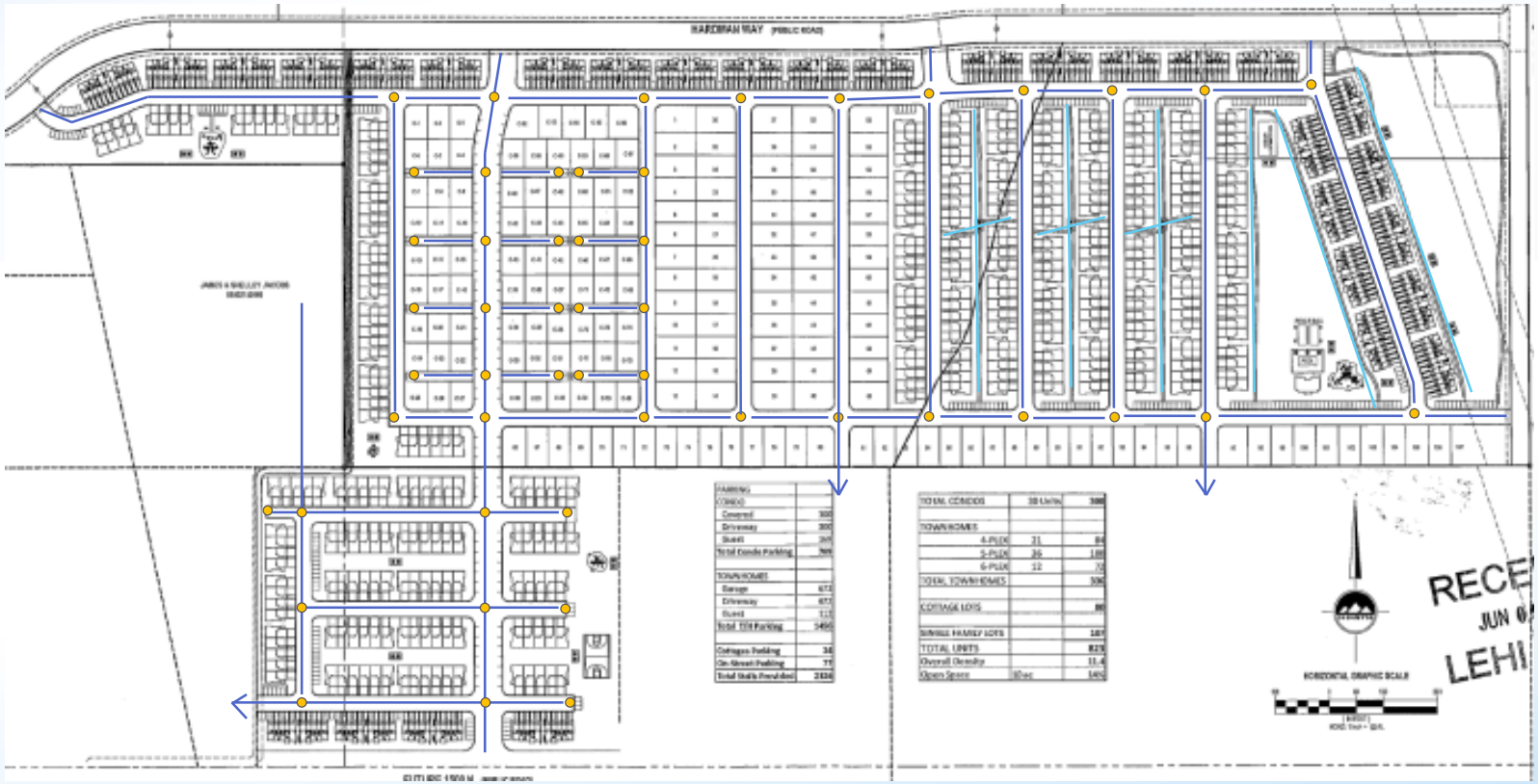
CI = 1.55
Required = 1.75

NEW DEVELOPMENT EXAMPLE



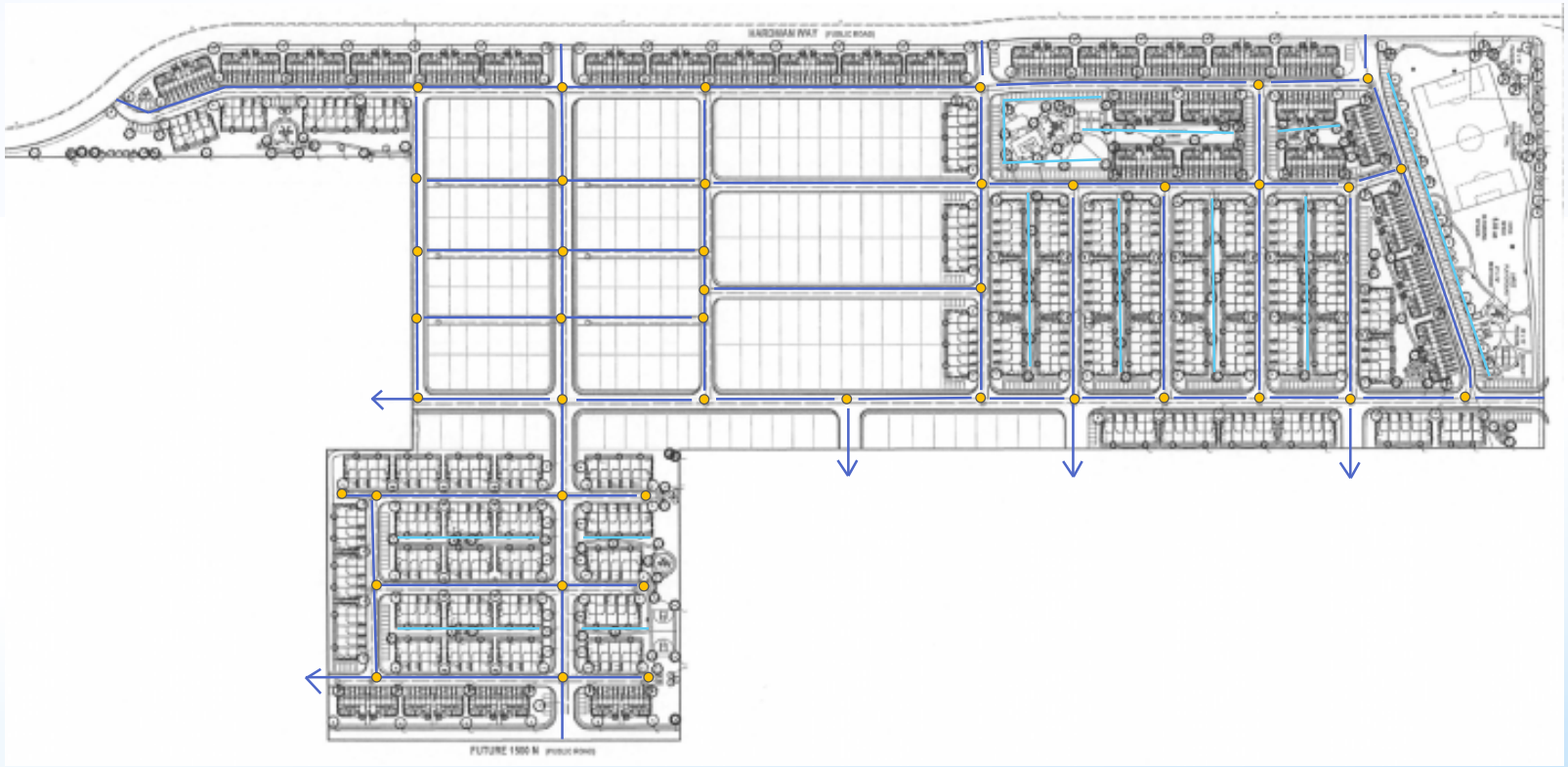
CI = 1.48
Required = 1.75

NEW DEVELOPMENT EXAMPLE



CI = 1.61
Required = 1.75

NEW DEVELOPMENT EXAMPLE



CI = 1.88
Required = 1.75

CONTACT INFO

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WASATCH CHOICE

WASATCH FRONT REGIONAL COUNCIL

Active Transportation Goals - 2017

1. Update shared Regional Priority Bicycle Routes Plan/Map
2. Cities and counties adopt Local Active Transportation Plans [that align with Regional Priority Plan/Map]
3. Fund and construct priority projects
4. Build support for AT through effective engagement and outreach