



## Workshop - Lines on the Map

May 16, 2013

# Tonight

Plan and process scope

Results from first workshop

Connections, demand and capacity

Bike routes

Report

Wrap up



**Workshop - Lines on the Map**

*May 16, 2013*

# Sponsors

WA Dept of Commerce

City of Spokane

City of Airway Heights

City of Medical Lake

City of Cheney

Spokane County

WSDOT



**Workshop - Lines on the Map**

*May 16, 2013*

# Scope

Updated arterial plan

Major highways

Arterial streets

Non-motorized routes

Character



**Workshop - Lines on the Map**

*May 16, 2013*

# Workshop 1 Results



**Workshop - Lines on the Map**

*May 16, 2013*





**Workshop - Lines on the Map**

May 16, 2013





## Workshop - Lines on the Map

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## Activity 1: Goal and Policy Review

The Cities of Spokane, Airway Heights, Cheney, Medical Lake, and Spokane County together with other state and local agencies are working to identify transportation facility needs on the West Plains. The project, funded by a grant from the Washington State Department of Commerce, will inform upcoming transportation planning work on the West Plains. To ensure transportation facilities meet the needs of residents and businesses, we need your help to review existing goals, policies, and recommendations. These goals, policies, and recommendations are important because they will help direct transportation projects throughout the West Plains.

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Goals, Policies, and Recommendations	1	2	3	4	5	Notes
<b>Airway Heights Comprehensive Plan</b>						
Make US 2 a traffic corridor that supports the Airway Heights community, accommodates traffic volumes, enhances traffic safety, and makes it attractive to pedestrians.		1	1	2	15	
Encourage roadway design approaches on US 2 that include structural traffic calming elements, planting trees, or other techniques.	1	1	8			
Pursue ways to more effectively link areas north and south of US 2.		1	5	3	6	
Maintain adequate rail and highway access to the community's industrial areas.				4	8	
Ensure Hayford and Craig roads continue to serve as a north-south link and truck route between I-90, US 2 and SR 902.				2	9	
Use public investment along the US 2 corridor to create a strong pedestrian environment.	2	1	4	3	1	
<b>Spokane Comprehensive Plan</b>						
Plan for transportation on a regional basis	1			6	9	
Provide a variety of transportation options, including walking, bicycling, taking the bus, carpooling, and driving private automobiles.	1		2	6	8	
Build streets with the minimum amount of street width needed to serve the street's purpose and calm traffic.	2	1	8	5		
Accommodate moving freight and commercial goods in ways that are safe, cost efficient, energy efficient, and environmentally friendly.			5	6	5	
Plan and construct transportation improvements with care, considering natural land forms, geography, and nature corridors.		5	8	1	2	
<b>Spokane County Comprehensive Plan</b>						
Provide a safe and efficient system of rural roads.		3	5	7	1	
Develop and maintain safe and efficient transportation connections between urban population centers.			3	8	5	
Ensure that proposed rural collectors avoid significant natural areas or historic resources where possible.	1	3	8	2	1	
Ensure that the transportation system in the rural areas are consistent with their rural/resource character.		4	10	2		
Designate I-90, US 2, and SR 902 as aesthetic corridors to provide a positive image of the Spokane region.	1	3	7	5		
<b>Spokane Regional Transportation Council: West Plains - Spokane International Airport Study</b>						
Construct a new 3-lane minor arterial south of US 2 along 21st Ave.		3	4	7	1	
Construct a new transit park and ride facility near the Medical Lake interchange.		3	3	4	6	
Develop a separated bike and pedestrian pathway along US 2 on the north and south side of US 2 from the Sunset/Airport Interchange to Fairchild Air Force Base.	1	3	5	3	3	
Build sidewalks along existing roadways and in gaps throughout the West Plains study area.	1	1	5	2	3	
<b>Washington State Department of Transportation: US 2 Route Development Plan</b>						
Improve the parallel 21st Ave corridor to relieve congestion on US 2.	2	2	1	10	1	
Include a separated pedestrian/bicycle pathway in conjunction with development along US 2 corridor.	1	3	7	1	4	
Support expansion of existing arterials such as 6th and 12th Avenues from Craig Rd. to Spotted Rd.	2	4	3	4		
<b>Additional goals, policies, or recommendations you'd add:</b>						

# Workshop 1 Results

Enhance US 2 through Airway Heights for vehicles, pedestrians, and bikes

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<b>Additional goals, policies, or recommendations you'd add:</b>						

# Workshop 1 Results

Provide for a variety of transportation options

Workshop - Lines on the Map

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# Workshop 1 Results

Develop safe and efficient transportation connection between urban centers

Workshop - Lines on the Map

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# Workshop 1 Results

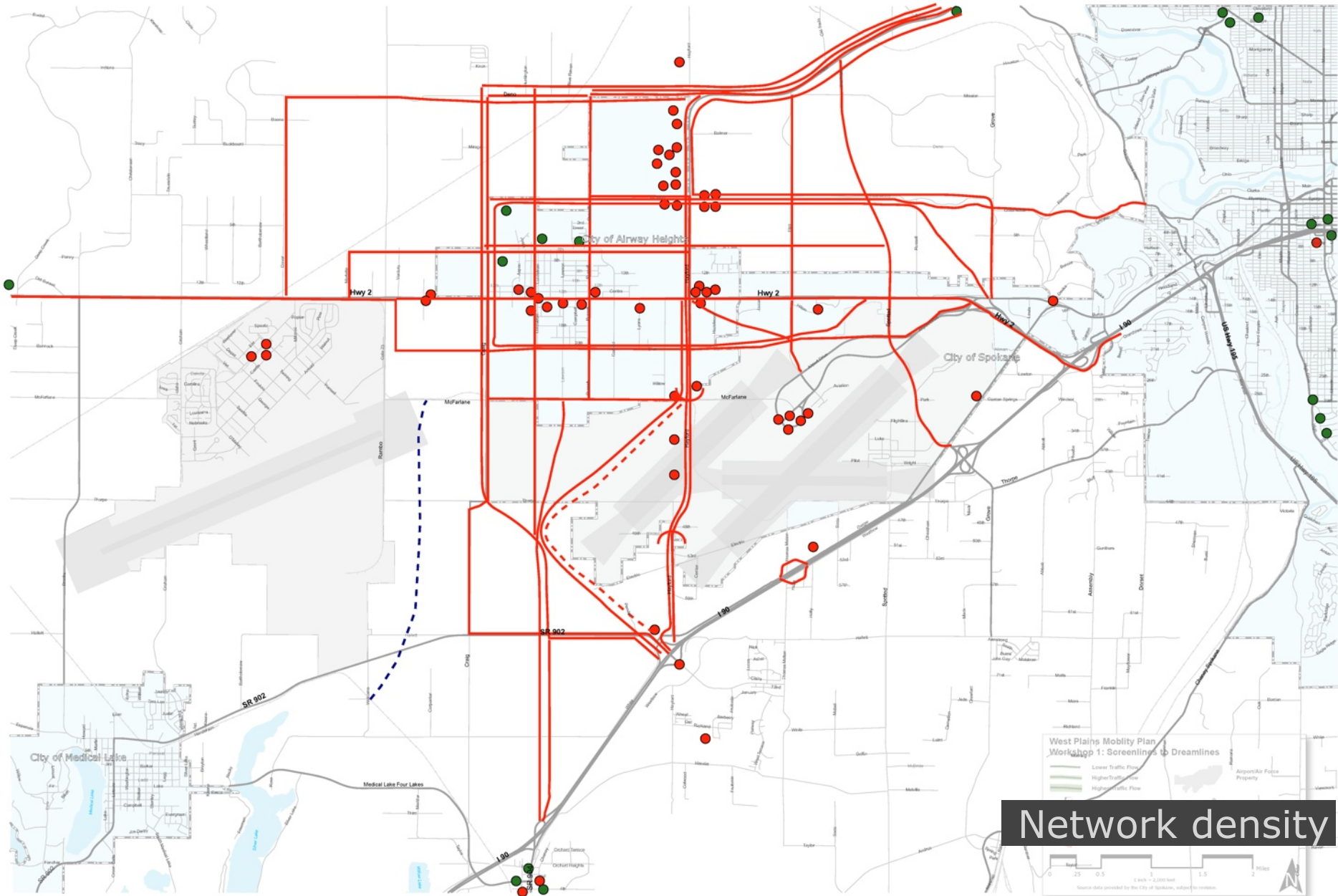
Improve 21<sup>st</sup> avenue as parallel corridor to US 2

## Workshop - Lines on the Map

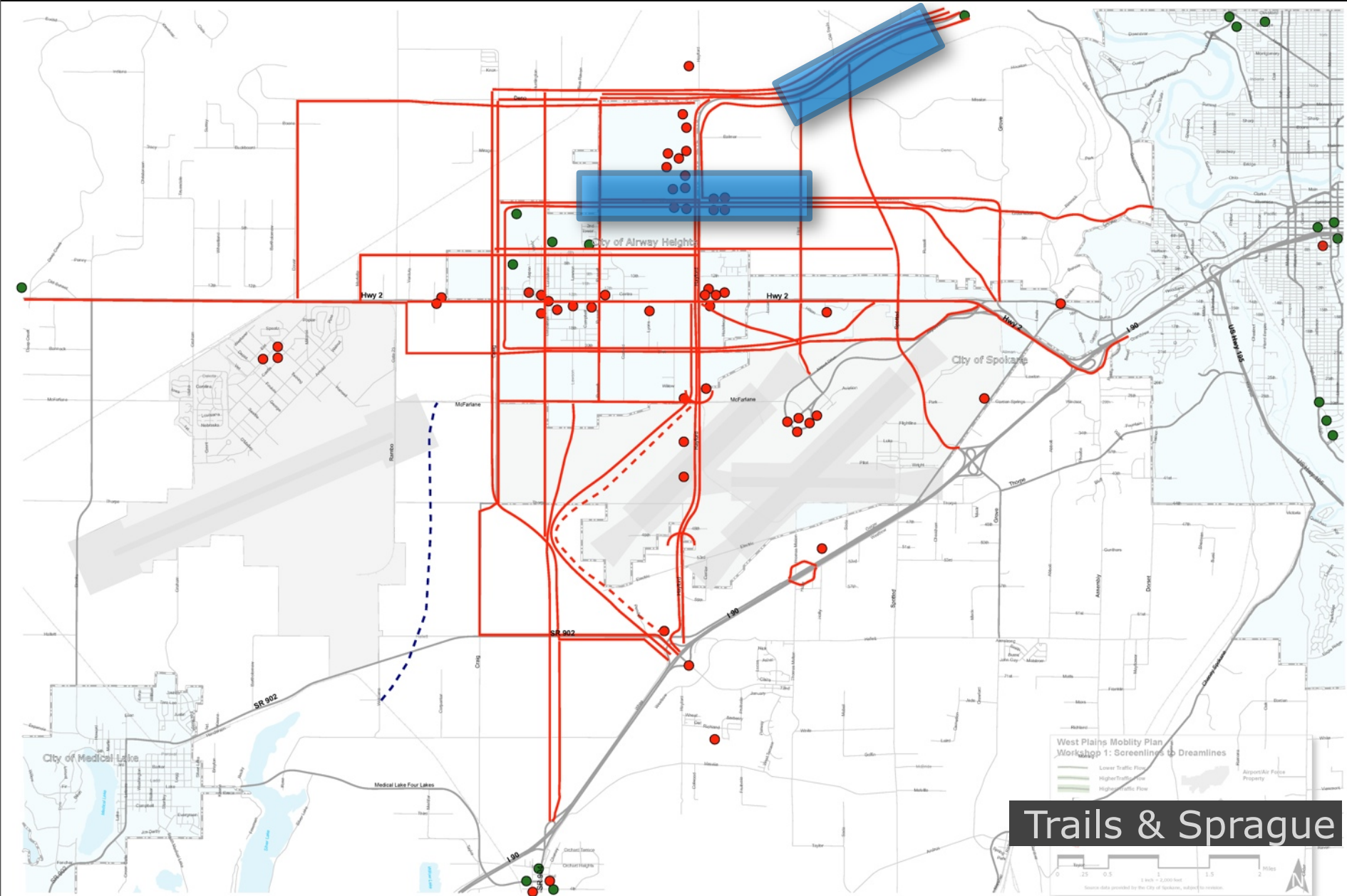
May 16, 2013



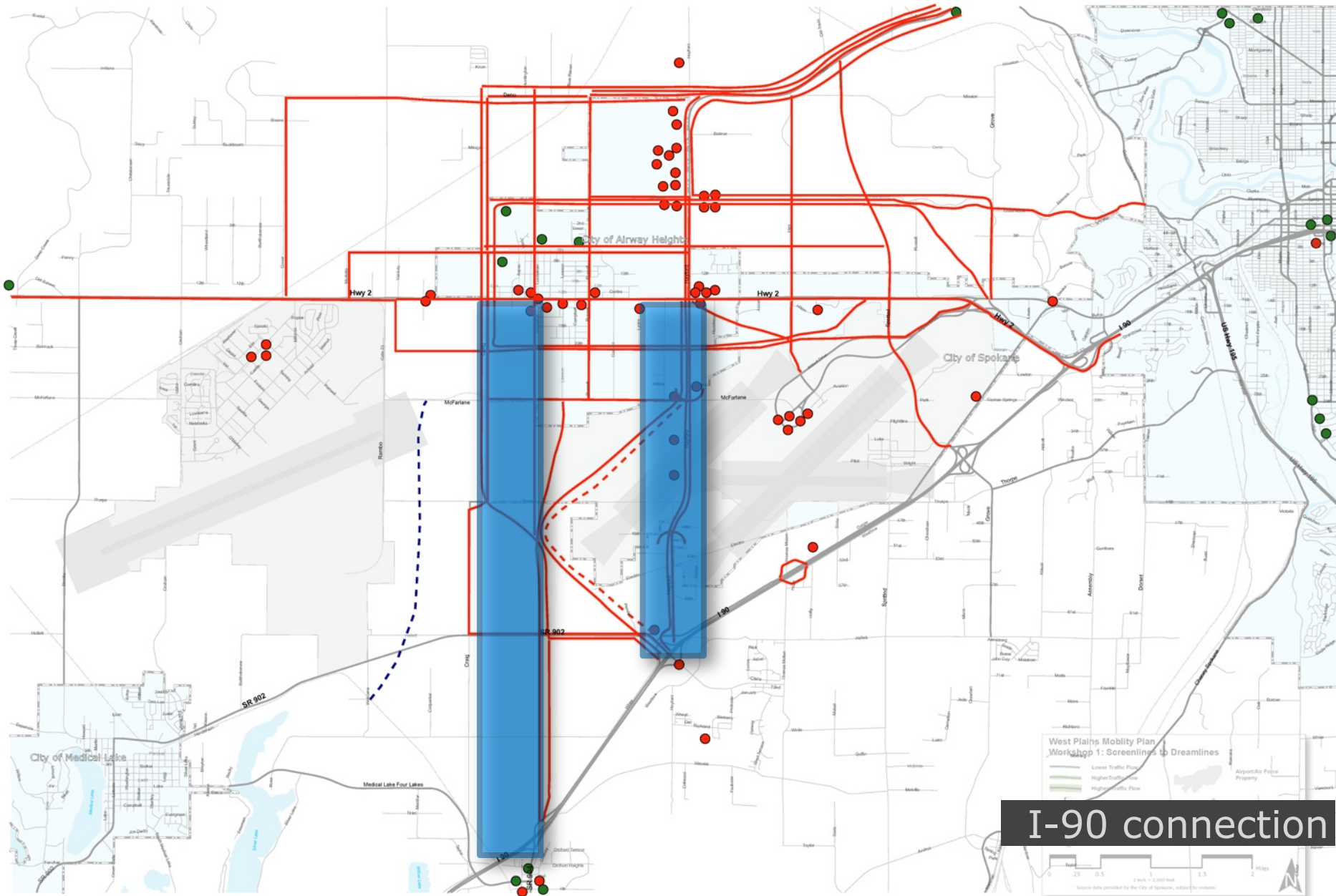
# Workshop 1 Results



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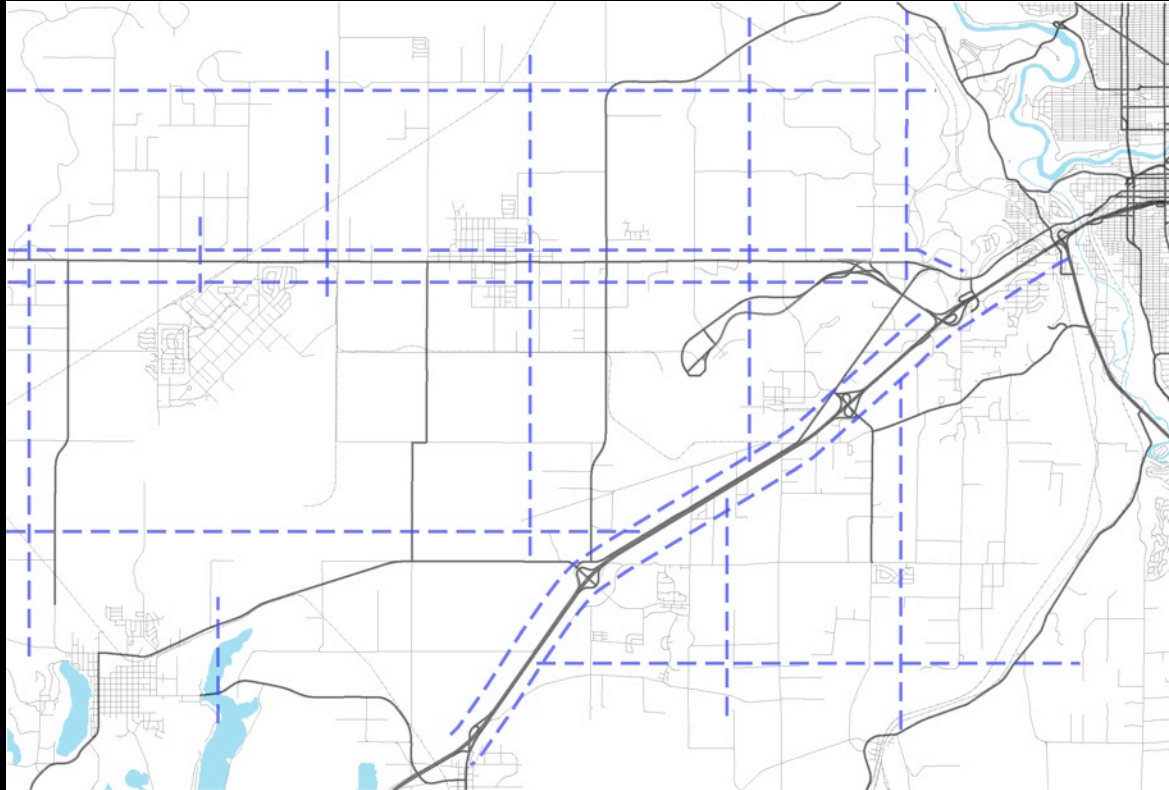


# Workshop 1 Results





# Capacity Analysis



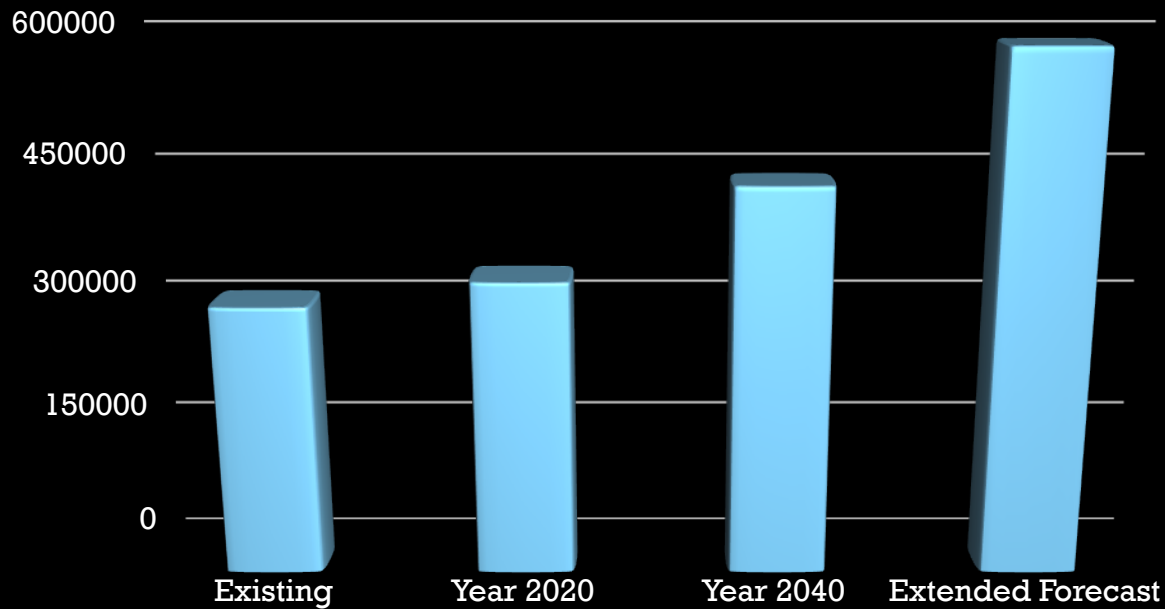
Screenlines  
Volume  
Capacity

**Workshop - Lines on the Map**

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# Forecast

## Total Screeline Volumes (Average Daily Traffic)



# Level of Service

LOS C

Road Section to	ADT Threshold	
<u>Maintain LOS C for:</u>	<u>Class I</u>	<u>Class II</u>
Two Lane Road	12400	8200
Three Lane Road	13600	9000
Four Lane Road	25600	19200
Five Lane Road	28200	21100
Six Lane Road	39400	30600
Seven Lane Road	43300	33700

*Table developed using ARTPLAN 2012 (Florida DOT, 2011)*

*Arterial LOS based on methods of HCM 2010*

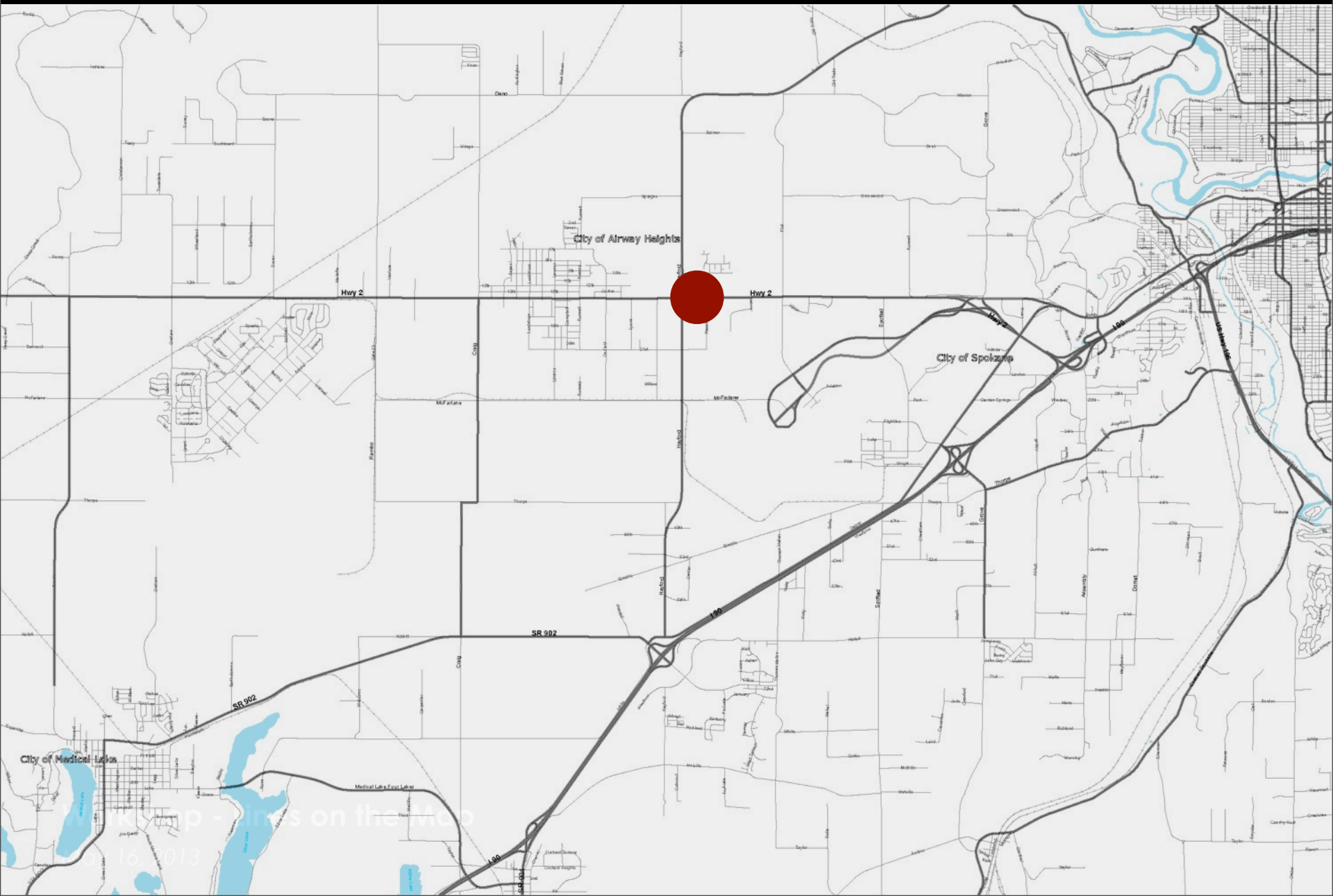


**Workshop - Lines on the Map**

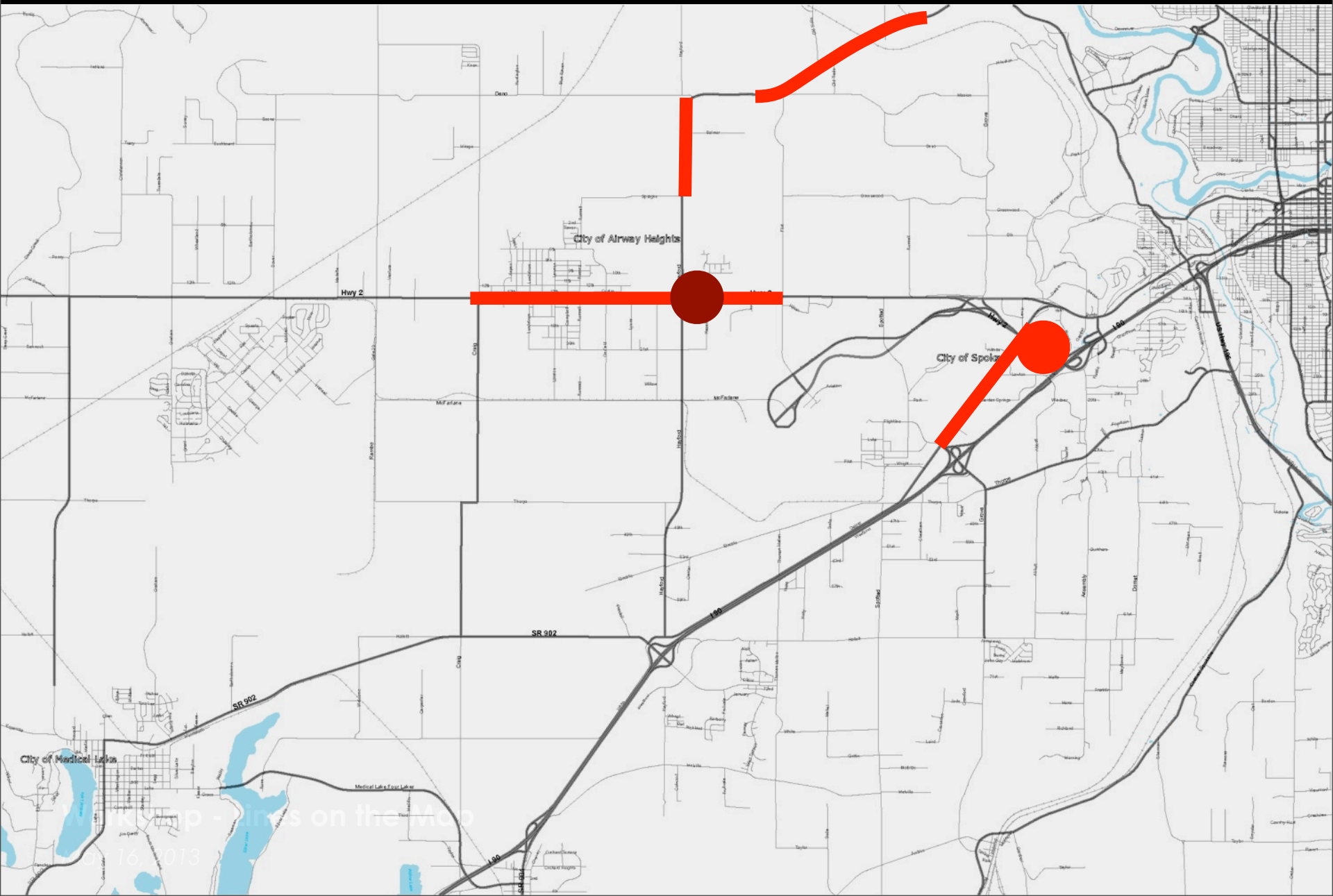
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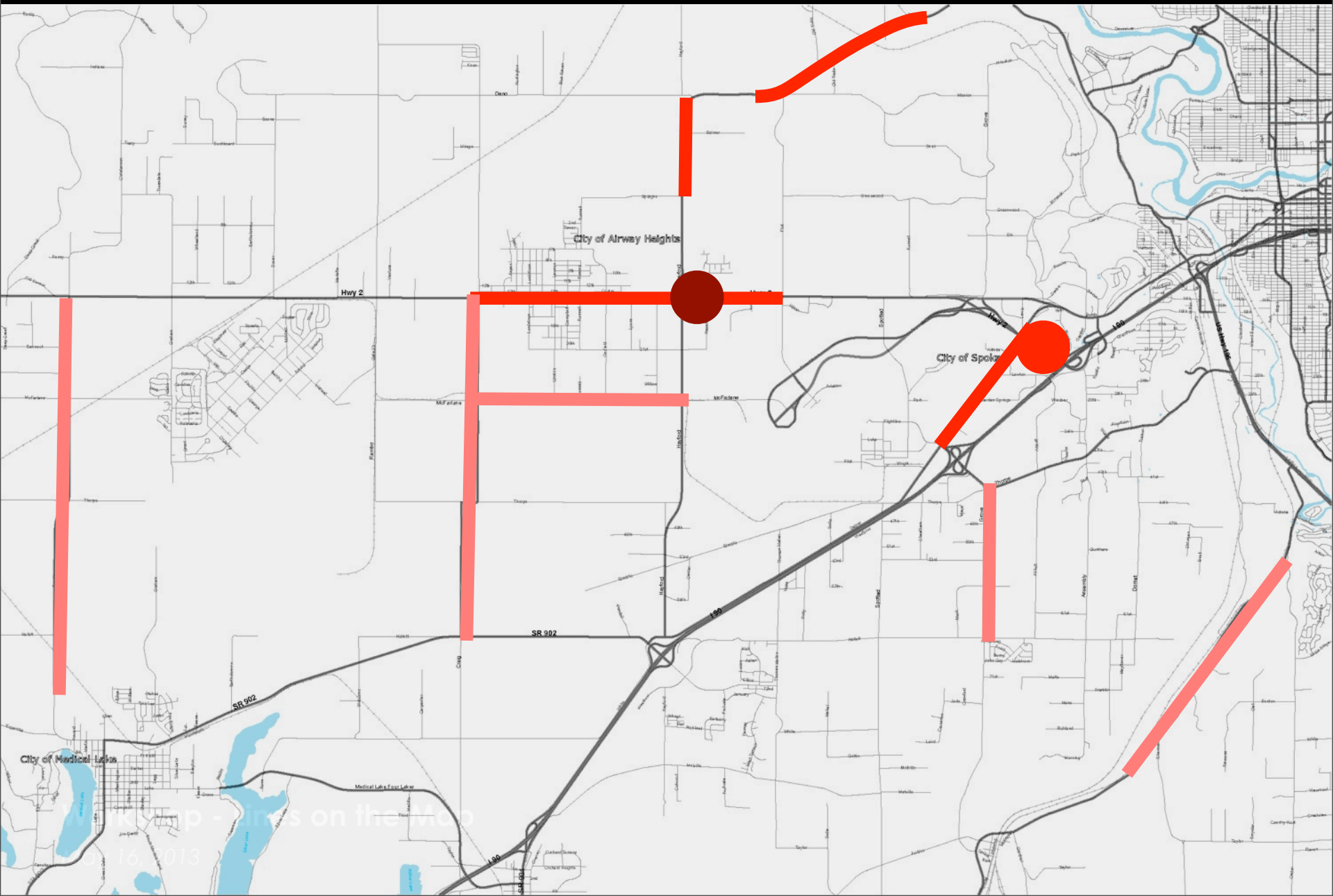
# Summary of Deficiencies



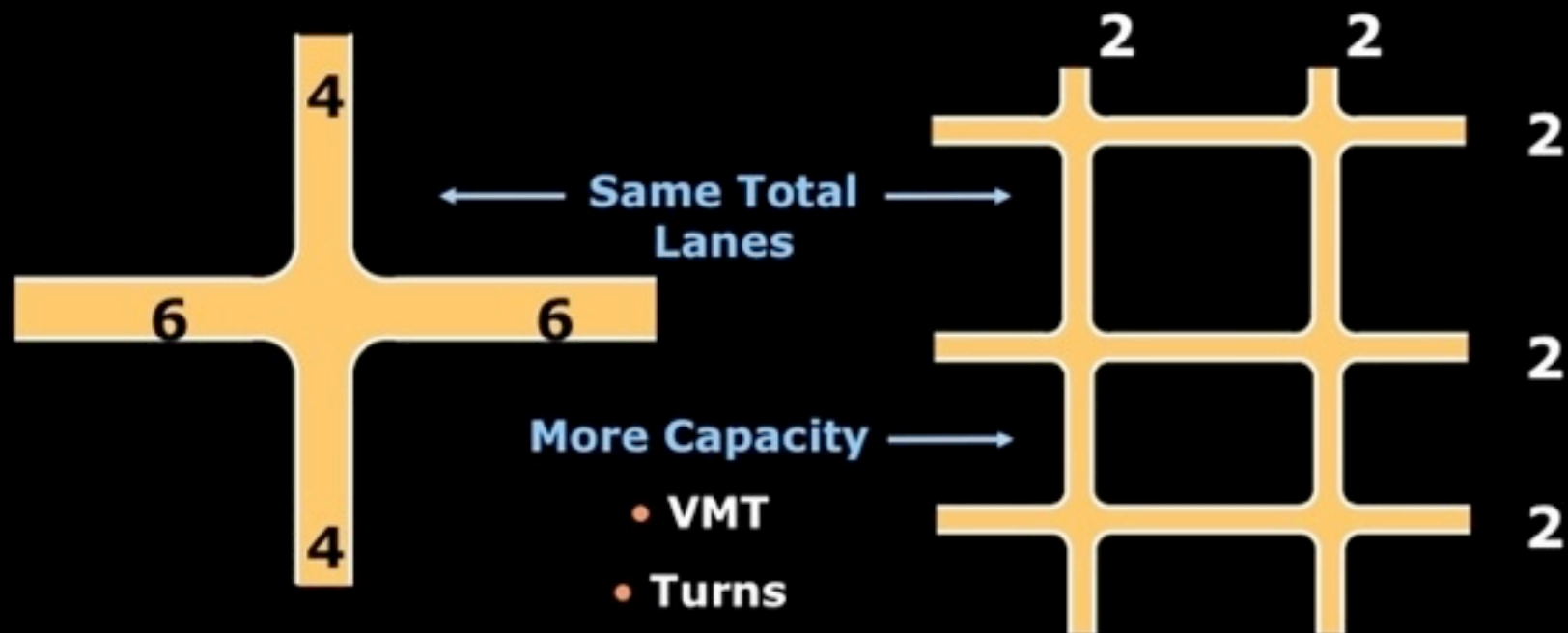
# Summary of Deficiencies



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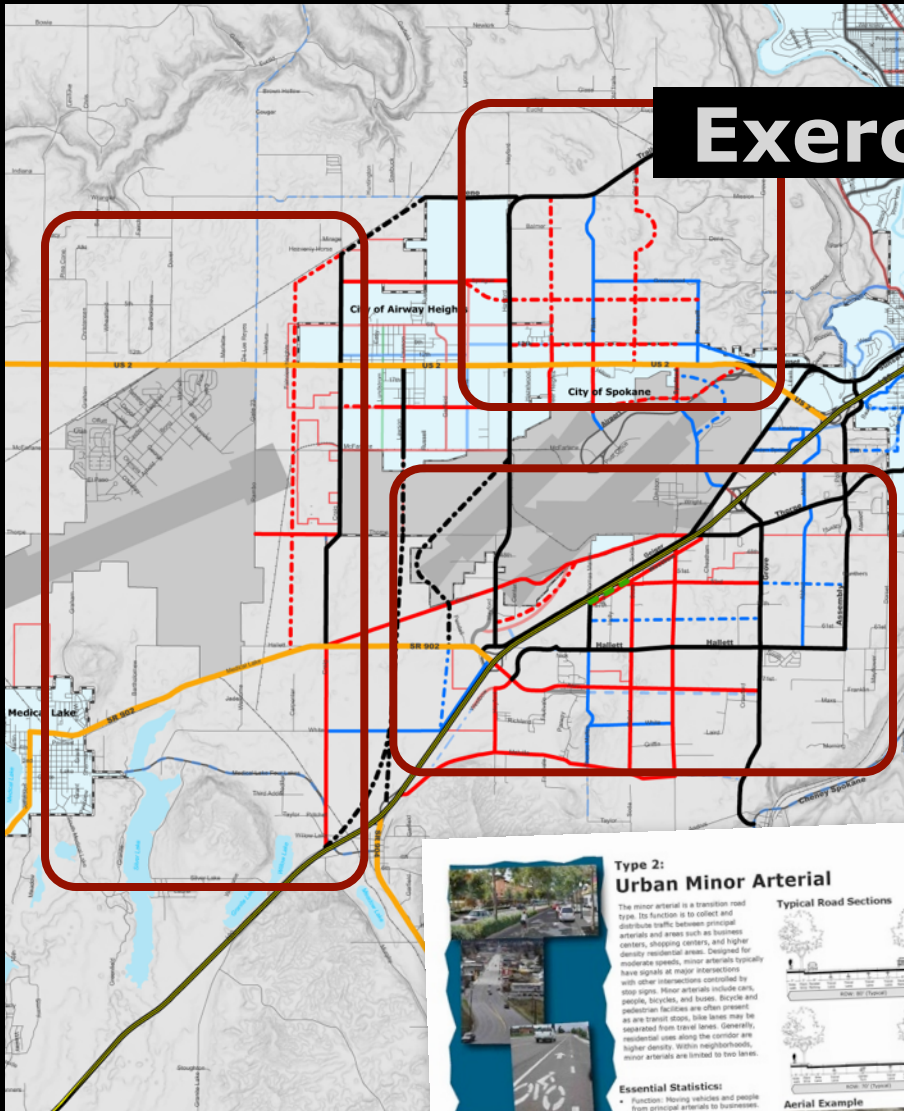






# Exercise 1 – Connections

Review by area  
Reference sourcebook  
Draw  
Add  
Note



## Type 2: Urban Minor Arterial

The minor arterial is a transition road type. Its function is to collect and distribute traffic between principal arterials and areas such as business centers, shopping centers, and higher density residential areas. Designed for moderate speeds, minor arterials typically have signals at major intersections with other intersections controlled by stop signs. Minor arterials include cars, people, bicycles, and buses. Bicycle and pedestrian facilities are often present, as are transit stops, but these must be separated from travel lanes. Generally, residential uses along the corridor are higher density. Within neighborhoods, minor arterials are limited to two lanes.

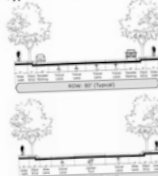
- Essential Statistics:**
- Function: Moving vehicles and people from principal arterials to businesses.
  - Typical Speed Limit: 45 - 55 MPH
  - Typical Capacity: 9,000 - 19,000 average daily traffic

**Drawing Symbol:**



Sample Images

### Typical Road Sections



### Aerial Example

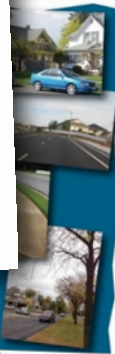


## Type 3: Urban Collector

The urban collector street provides both local access and traffic circulation within residential neighborhoods and commercial and industrial areas. Urban collectors distribute trips from arterials through the area to ultimate destinations and channels traffic into the arterial network. Designed for low to moderate speeds the urban collector may contain larger scale land uses like manufacturing, storage, and warehousing or residential use of moderate density. Parking lots are common along the road. Traffic control typically shares the road. Traffic control should be used to promote safety and encourage cut-through traffic between neighborhoods. Stop signs are used on approaches to residential collector streets.

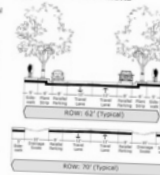
- Essential Statistics:**
- Function: Moving vehicles and people to principal and minor arterials or activity centers.
  - Typical Speed Limit: 25 to 45 MPH
  - Typical Capacity: 8,000 average daily traffic

**Drawing Symbol:**



Sample Images

### Typical Road Sections



### Aerial Example



## Type 1: Urban Principal Arterial

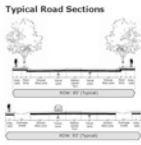
The principal arterial is intended primarily for motorized traffic. A principal arterial generally allows uninterrupted traffic flow between centers at moderate to high speeds. Typically, it has limited or controlled access to fronting properties. Intersections are usually at-grade and channelized. Side and parking lanes are not present, but principal arterials do include transit and pedestrian facilities including bus stops, park and ride, and sidewalks. Land uses may be varied, but generally include uses compatible with higher volumes and higher speed motorized traffic.

- Essential Statistics:**
- Function: Moving vehicles between centers of activity.
  - Typical Speed Limit: greater than 45 MPH
  - Typical Capacity: 21,000 - 38,000 average daily traffic

**Drawing Symbol:**



Sample Images



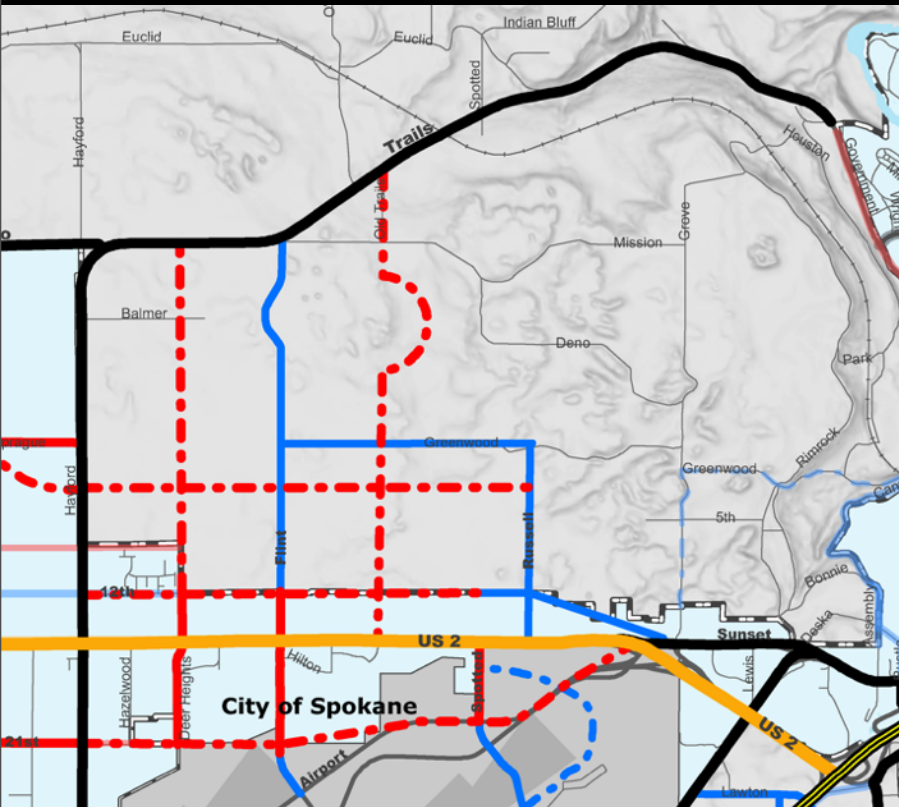
### Aerial Example



Workshop - Lines on the Map

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# Exercise 1 – Area 1



## East of Airway Heights north of US 2

Limited network density

Higher traffic volumes

Topography constraints

East-west and north-south  
connections to reduce US-2  
congestion

US 2 turning movements

Fairchild/SIA development limits



# Exercise 1 – Area 2

## West of Airway Heights

Very limited network density

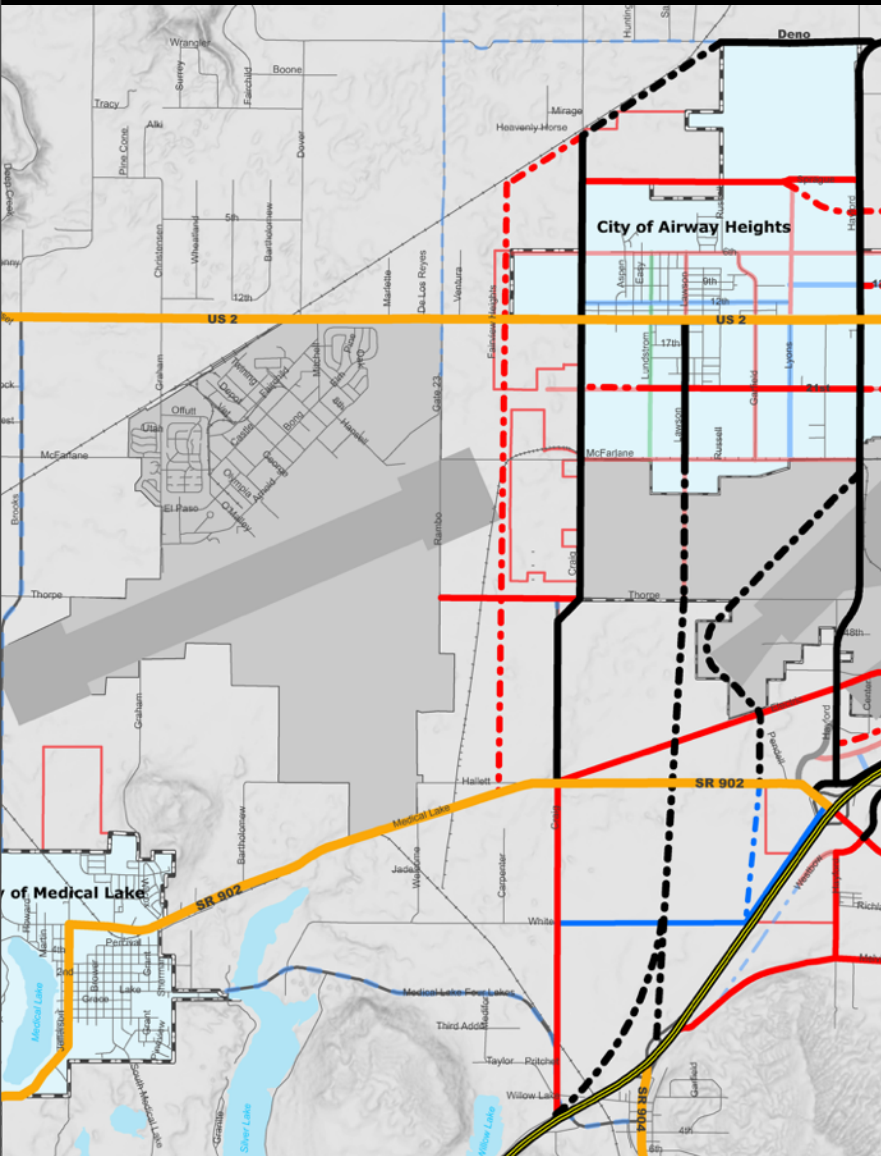
Lower traffic volumes

Minimal constraints

North-south connections for FAFB

Upgrade Craig to principal arterial

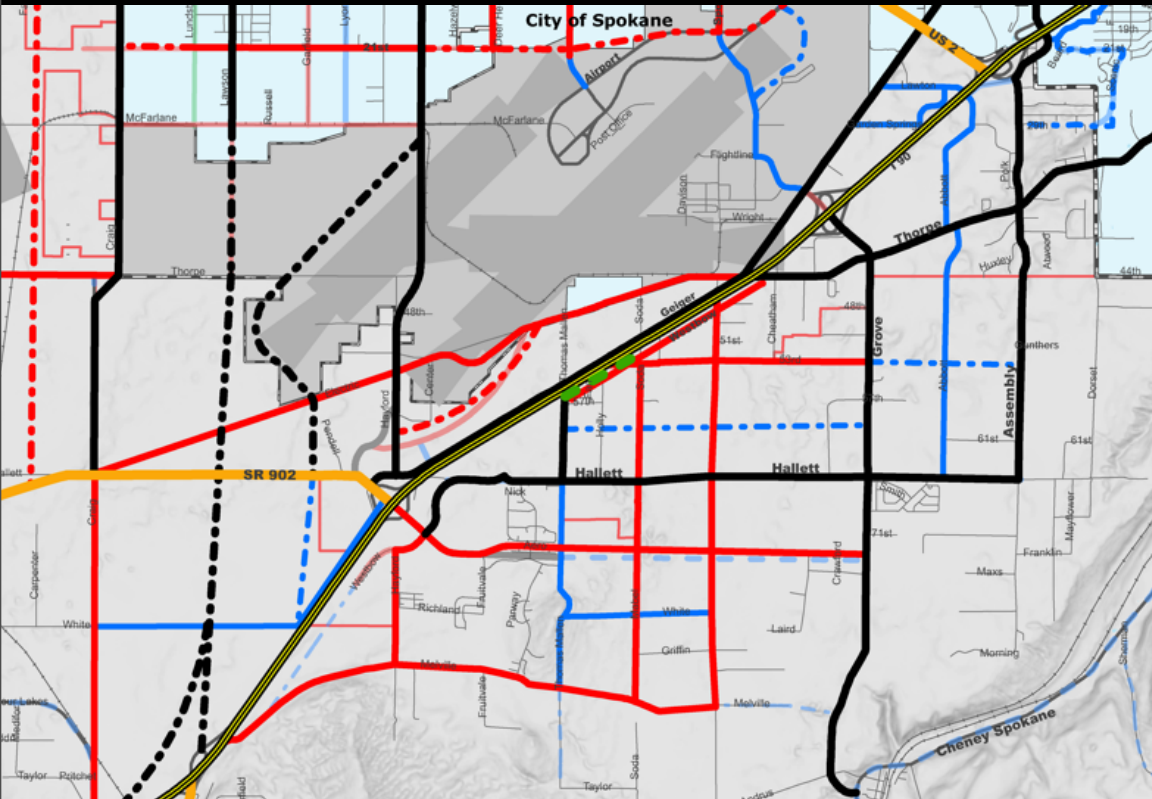
Area between SIA and Fairchild  
preserved for large lot industrial  
development



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## Exercise 1 – Area 3



## South of US 2

## Very low network density

## Lower traffic volumes

## SIA/FAFB constraints

## Topography constraints south of I-90

New additional principal  
arterials (Craig, Lawson,  
Hayford)

## Improved connections to I-90, Medical Lake, and Cheney

## Increased residential network density south of I-90

## Spotted and Hayford SIA realignment

## Workshop - Lines on the Map

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# Exercise 2 – Bike Network

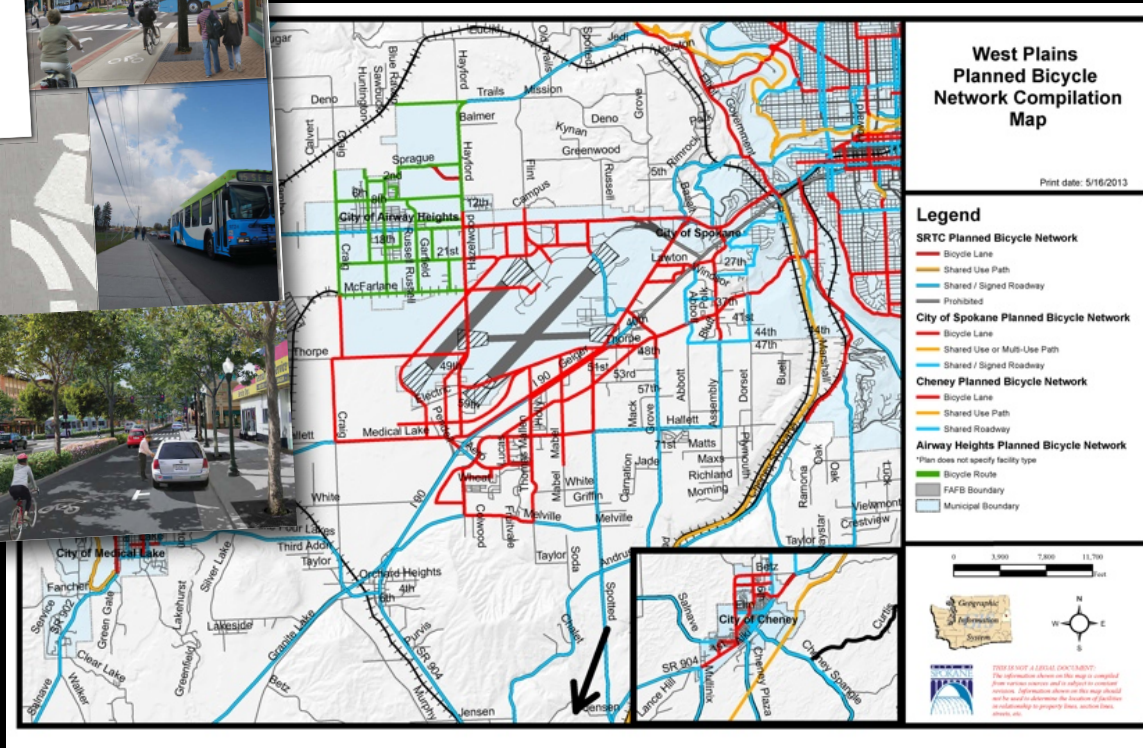
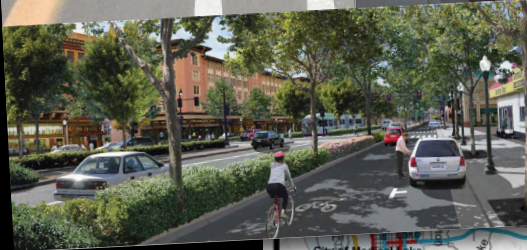
## Bicycle, Pedestrian, and Transit Facilities

Bicycle, pedestrian, and transit facilities are an important component of the transportation network. Providing safe, convenient, accessible, and comfortable routes for walking, biking, and public transportation reduces traffic congestion and provides alternative transportation choices use they can reduce the need to add roadway capacity.

Each of these facilities- bike, pedestrian, and transit have specific design standards that are needed to make them successful, for example, sidewalk location, bike lane width, or transit stop pull outs. To a large extent the design elements have been incorporated into the typical road sections seen on the previous pages and in existing standards.

In this step of the exercise, please review the planned bike network map on the back side of this page, then on the large map identify areas that may need special attention for bicycle facilities -pedestrian facilities are incorporated as part of the road system and transit is planned by Spokane Transit Authority. Here's how:

- Using circles, notes, or bubbles identify areas that are important bike routes.
- Please write down your comments and reasoning for your decision.



Review  
Route  
Note  
Add

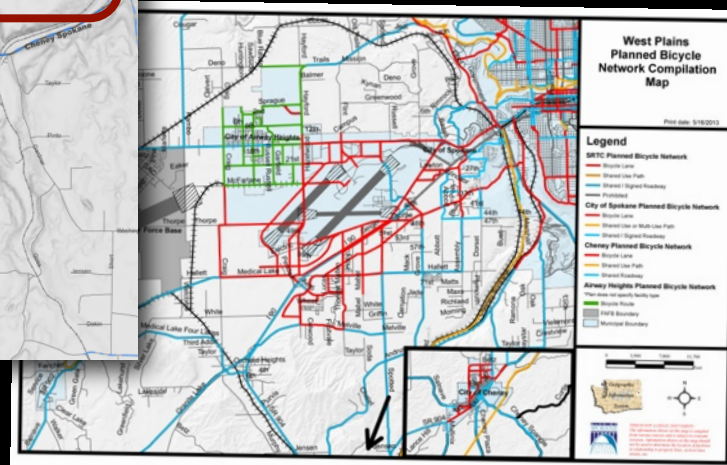
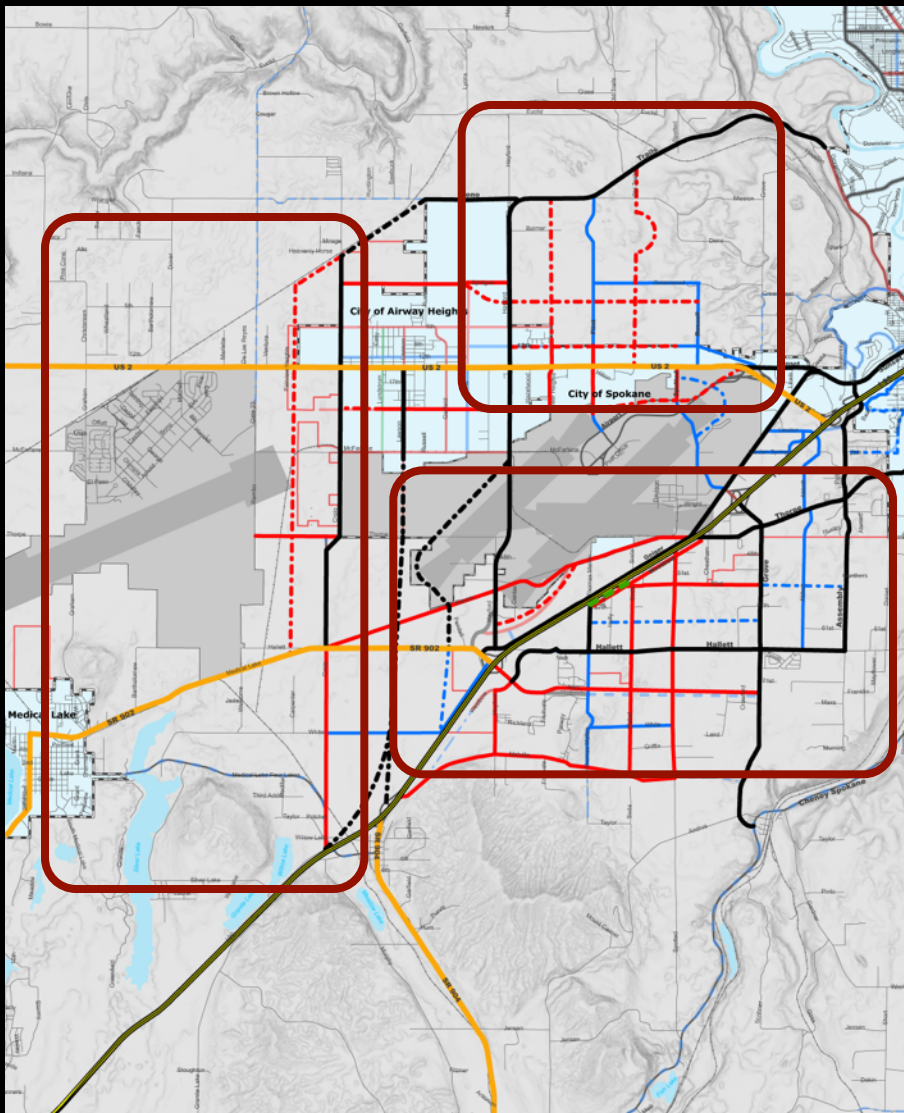
Workshop - Lines on the Map

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# Reports

Area arterials  
Bike routes

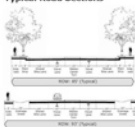


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## Type 1: Urban Principal Arterial

Typical Road Sections



### Essential Statistics:

- Function: Moving vehicles between centers of activity
- Typical Speed Limit: greater than 45 mph
- Typical Capacity: 21,000 - 28,000 average daily traffic

### Drawing Symbol:



### Aerial Example



Sample Images

# Next Steps

Report draft

Comprehensive plans

# Thank you!

Kathleen Weinand, AICP  
*City of Spokane*  
509-625-6146

[kweinand@spokanecity.org](mailto:kweinand@spokanecity.org)



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