



Putting the 'ART' back into C[ART]ography

Tiiki Rysen & Carrie Carsell

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www.fehrandpeers.com/

Tiiki Rysen

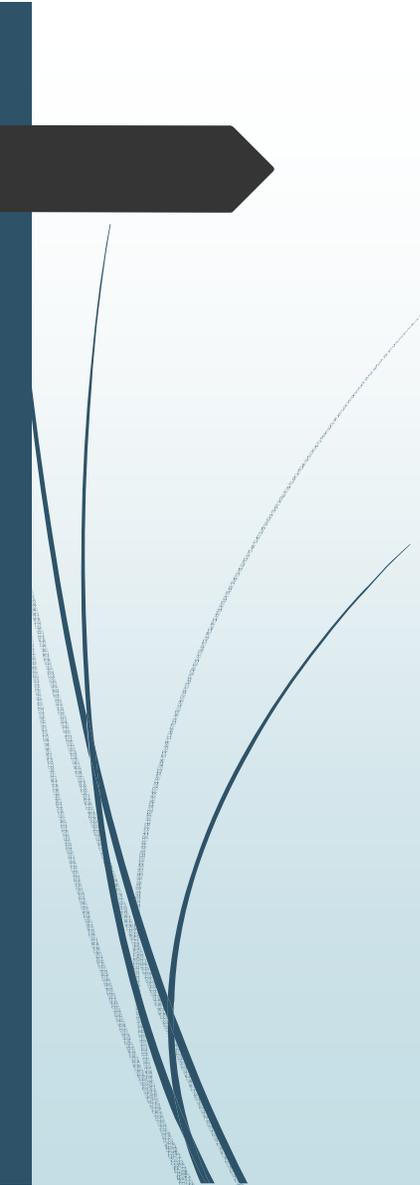
t.rysen@fehrandpeers.com

Carrie Carsell

c.carsell@fehrandpeers.com



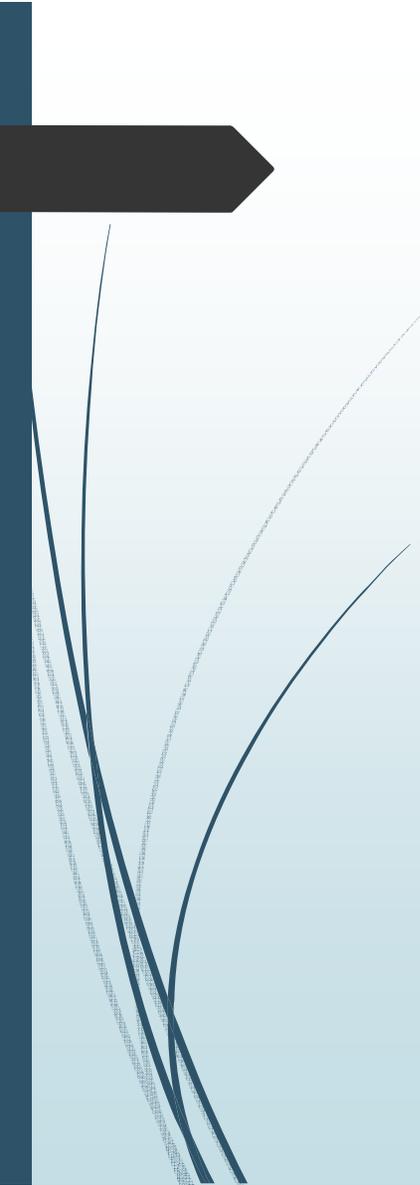
Make
it pretty
wednesdays



C[ART]outline

The Elements: What makes a great map?

- Background vs Foreground
- Visual Hierarchy
- Use of Color
- Custom Symbology & Fonts
- Map Generalization
- ... Have some Fun!

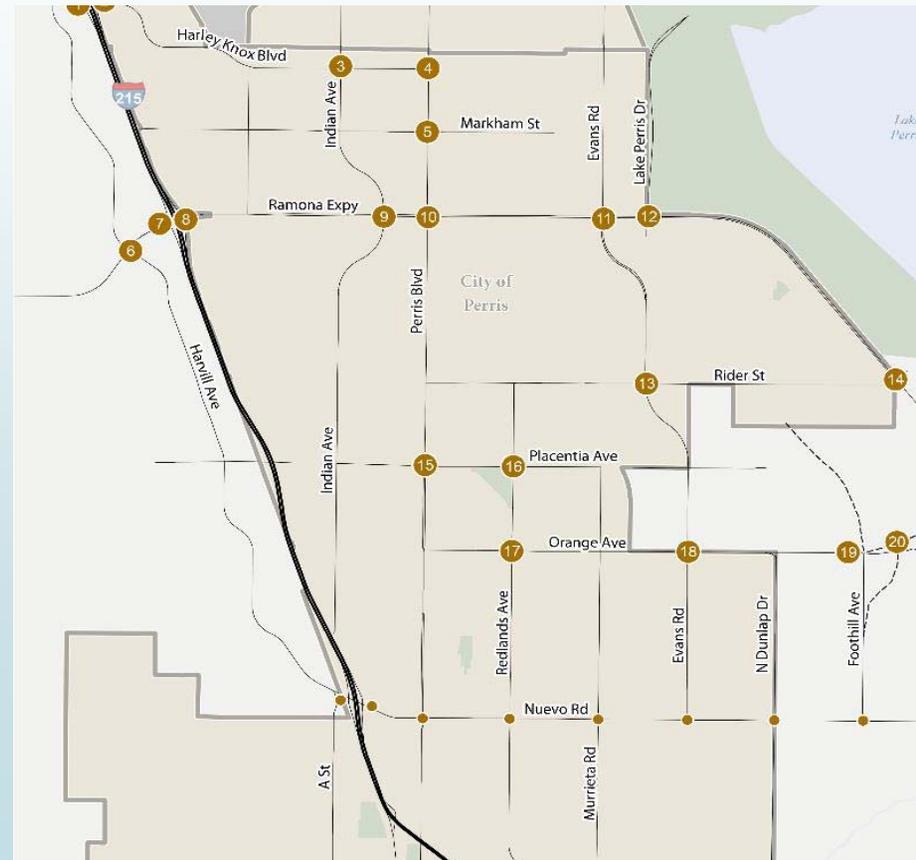
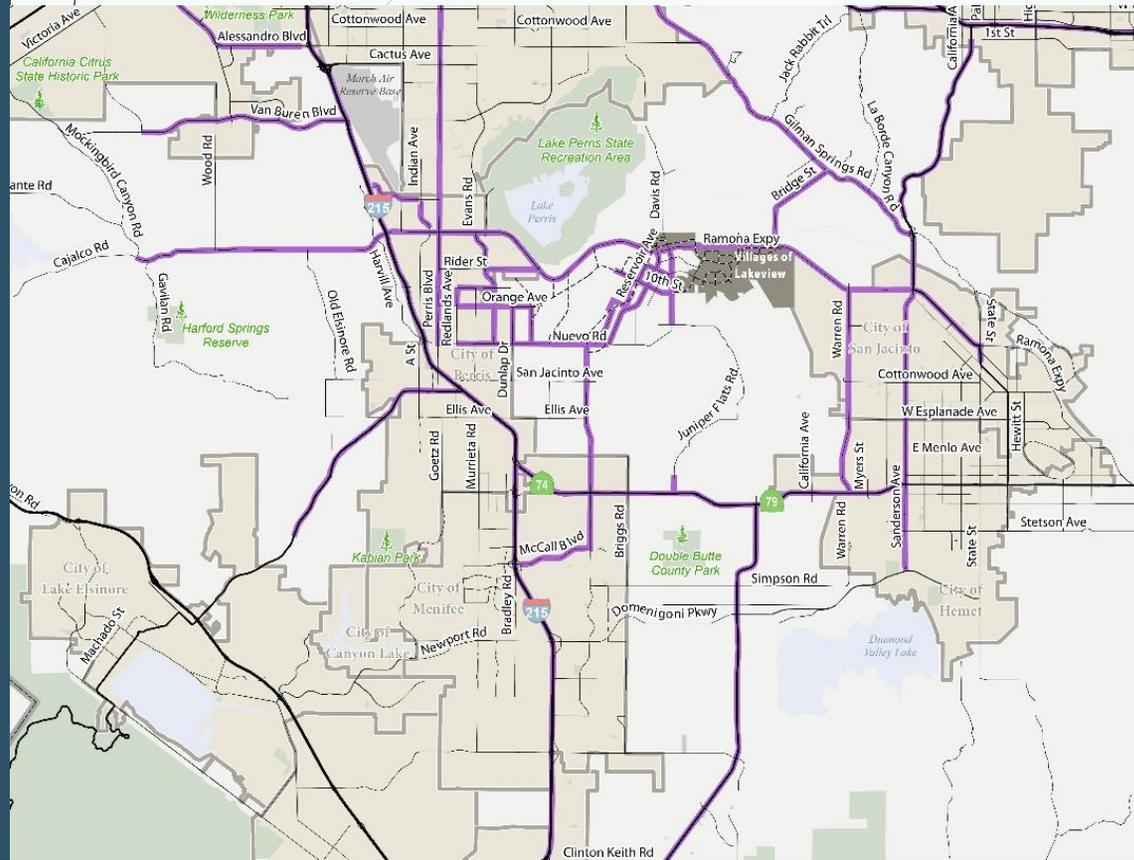


C[ART]elements

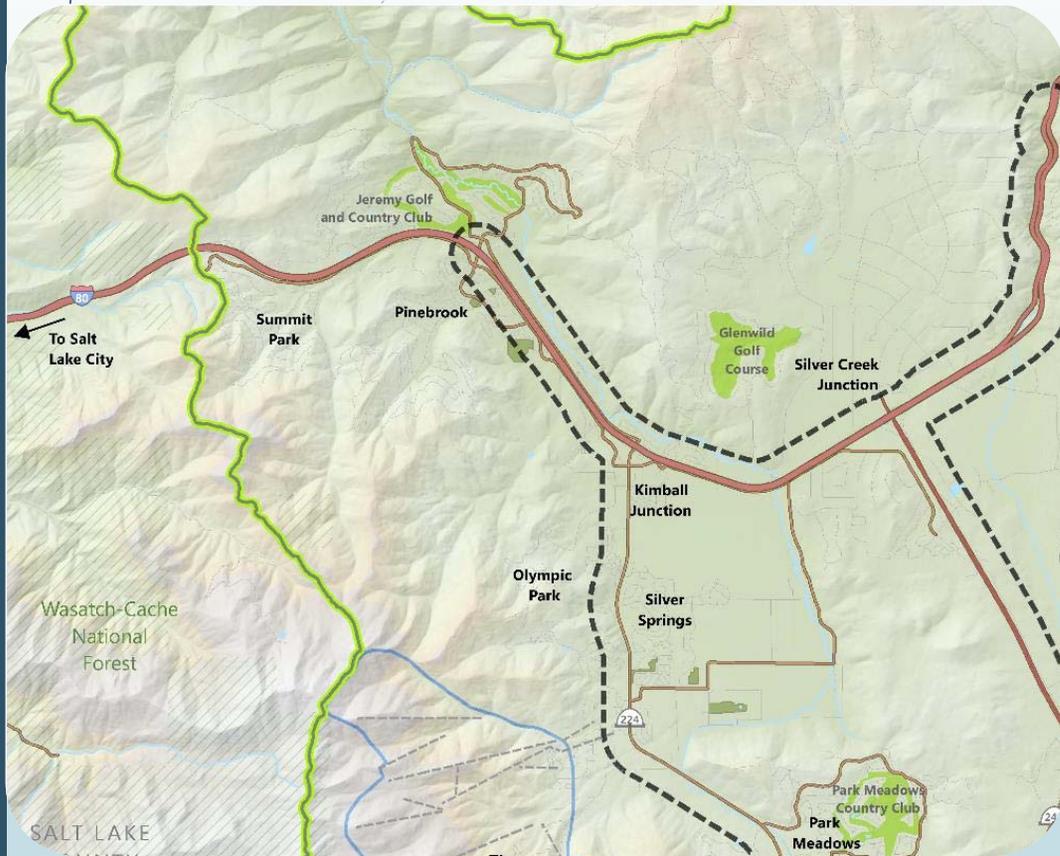
Background vs Foreground

- When creating a map, you want your background to be your canvas.
- The background should fall to the back and the data or message that you want to get across should pop off the page.
- Don't be afraid to get creative and use associative colors, symbologies and icons for your foreground information. Tell the story as easily and effortlessly as possible!

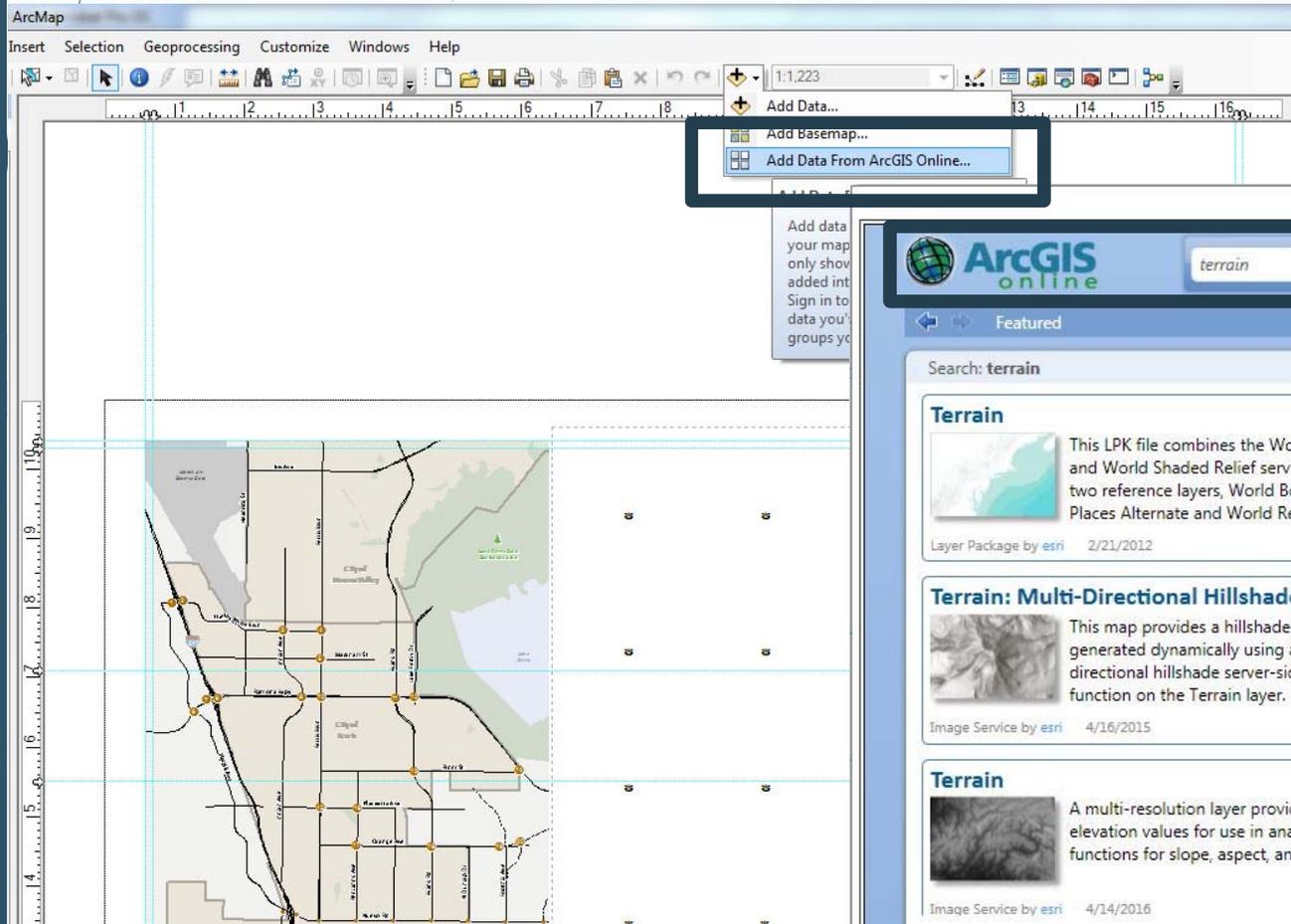
Background is your canvas



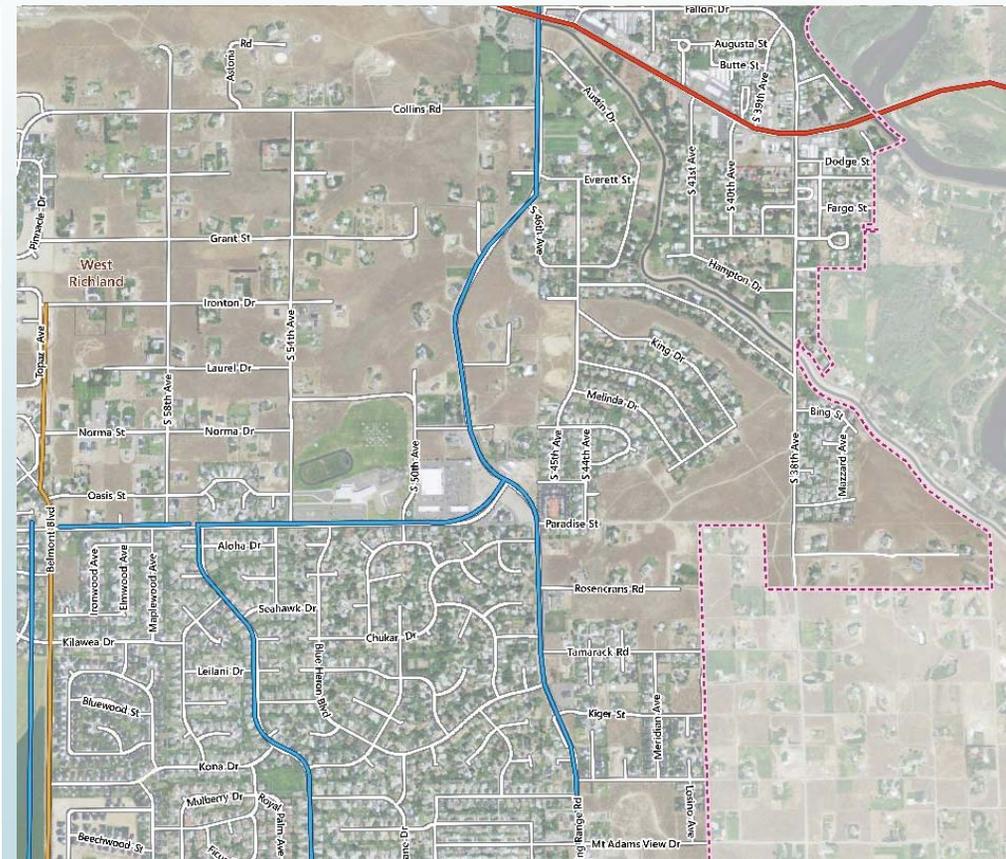
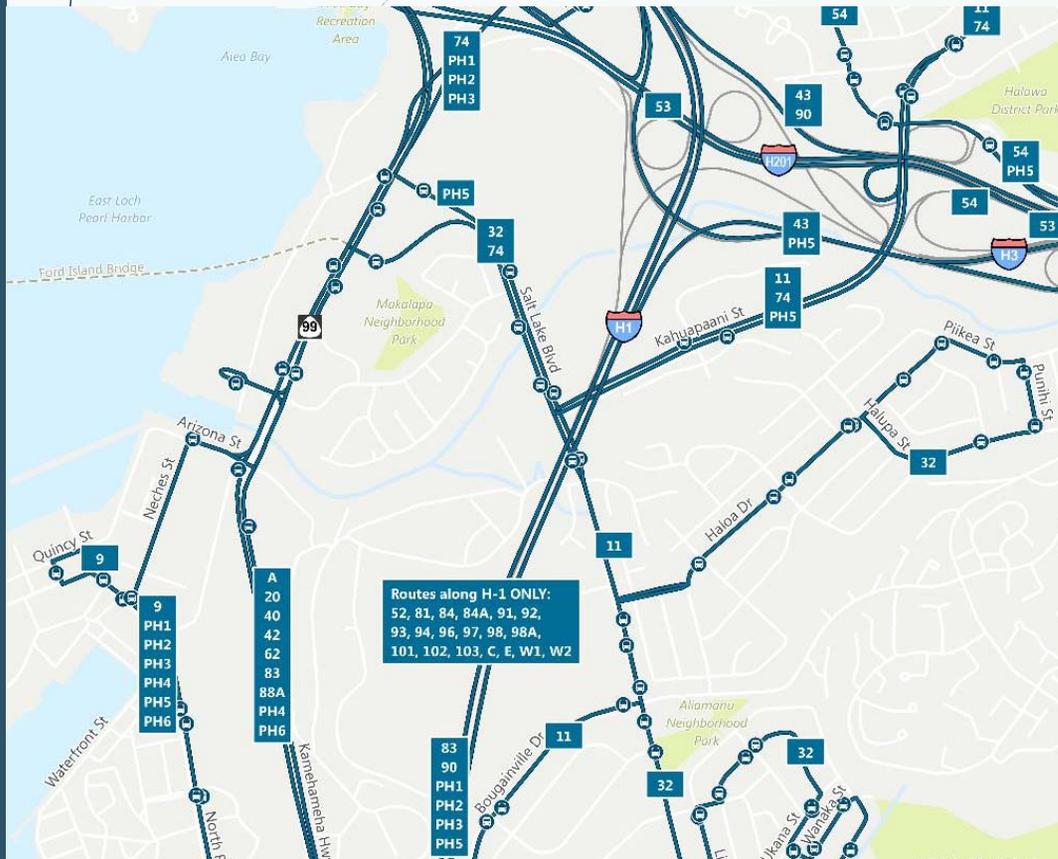
Soft Terrain or Faded Aerial



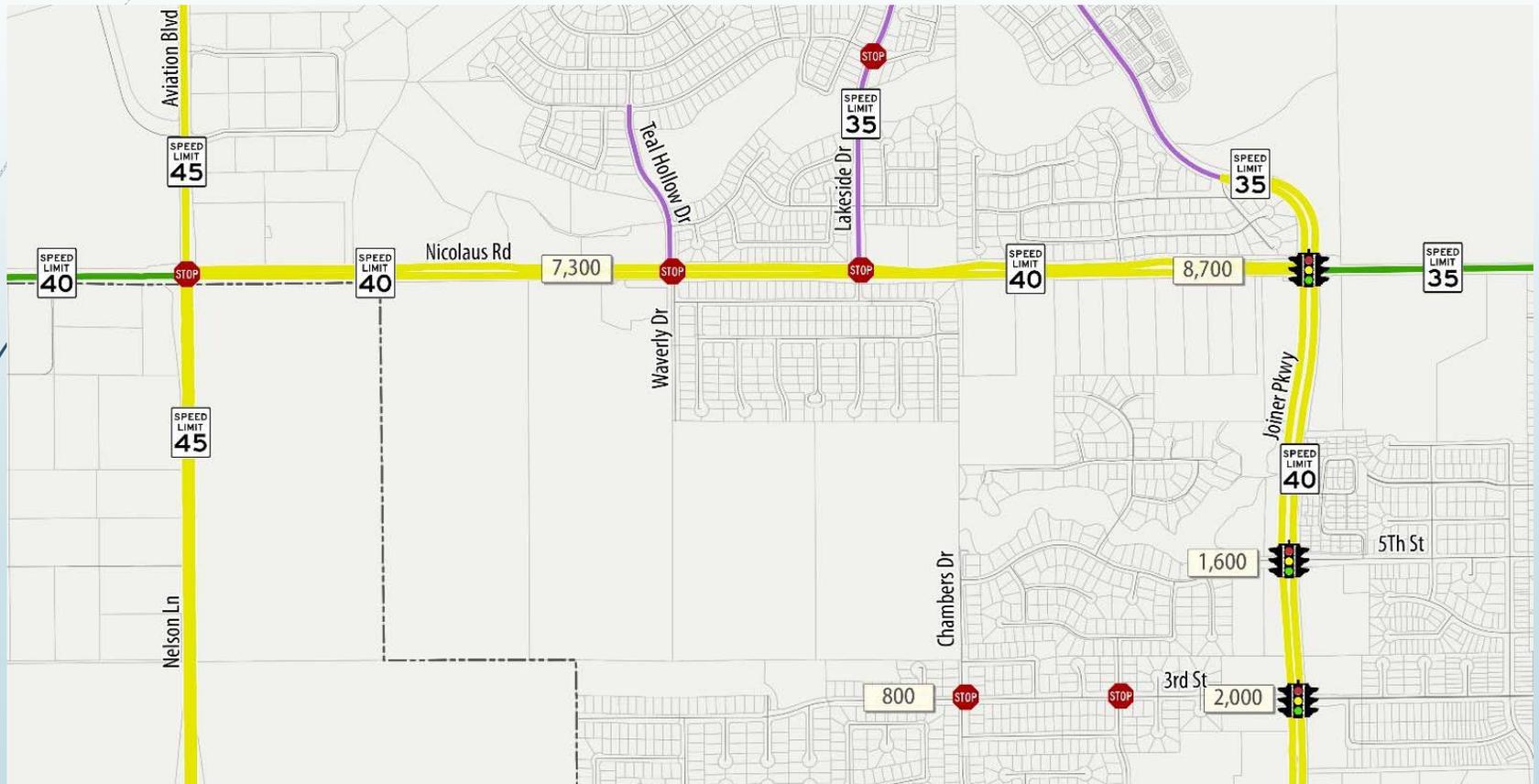
Use Esri Basemaps



Bright, Attractive Symbols in Foreground



Use Interesting Icons and Fonts



Associative Symbology



Pedestrian Crosswalk



Bus Stop



Golf Course



Hospital



Parking



Airport



Boat Launch



Shopping

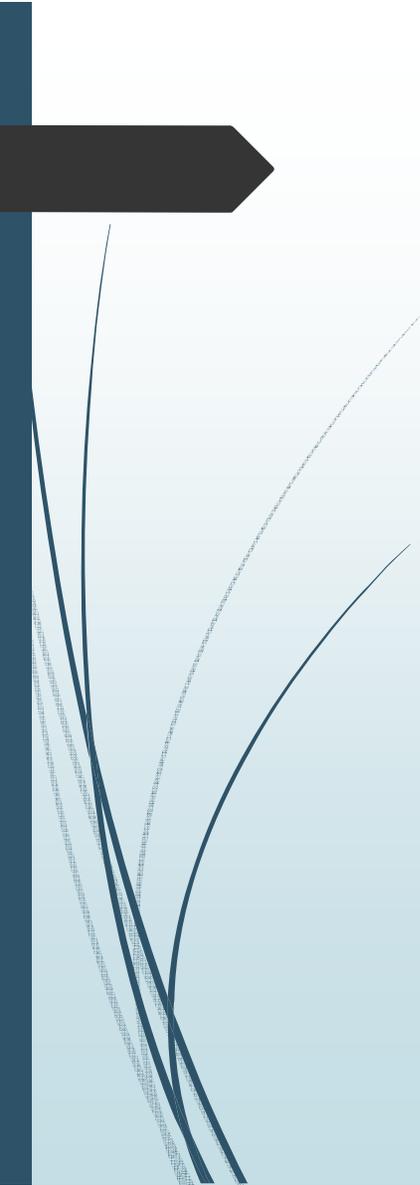


School



Train Station

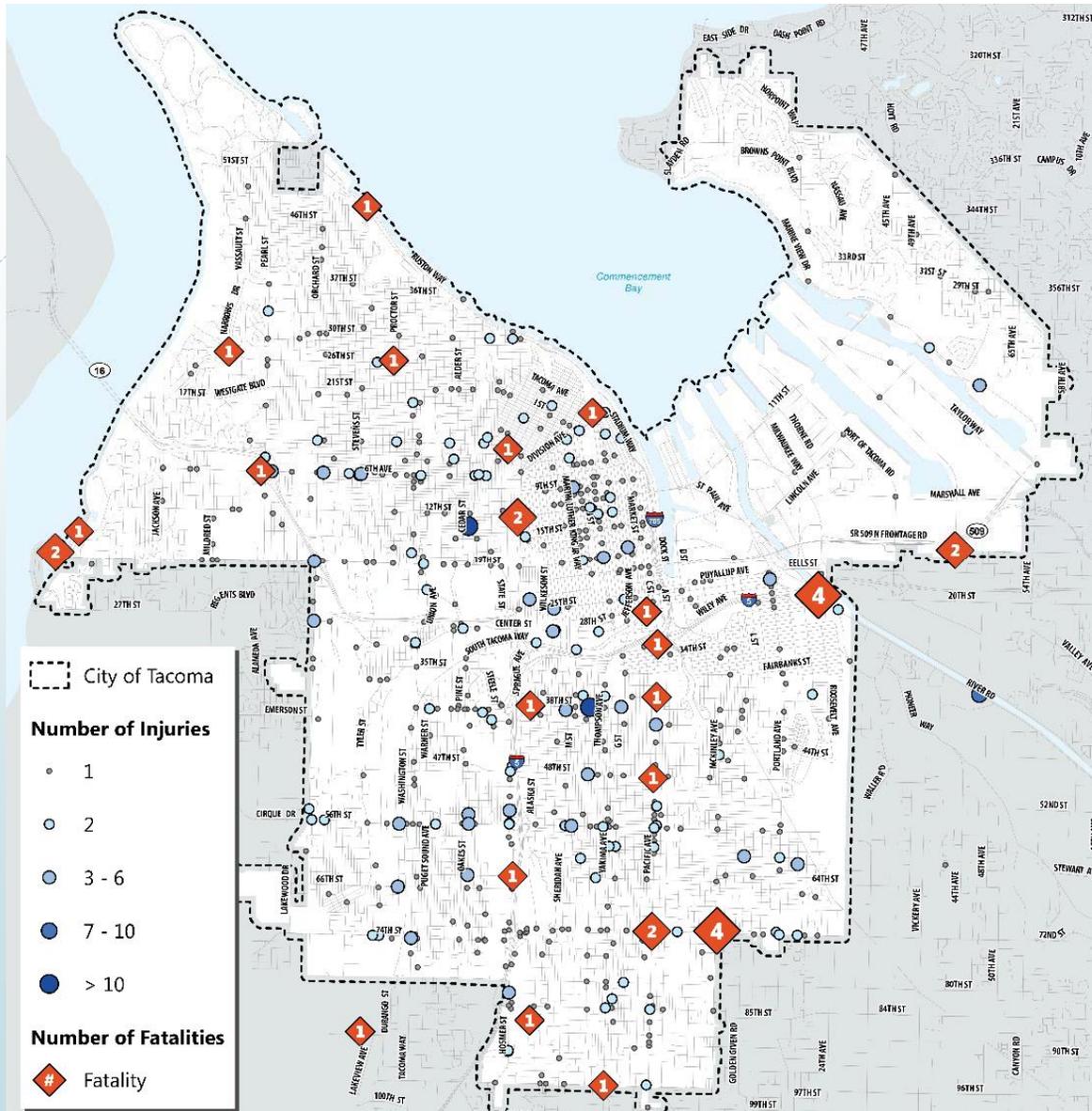
- 'Travelcons' is a great font that has a lot of cartographic elements and icons.

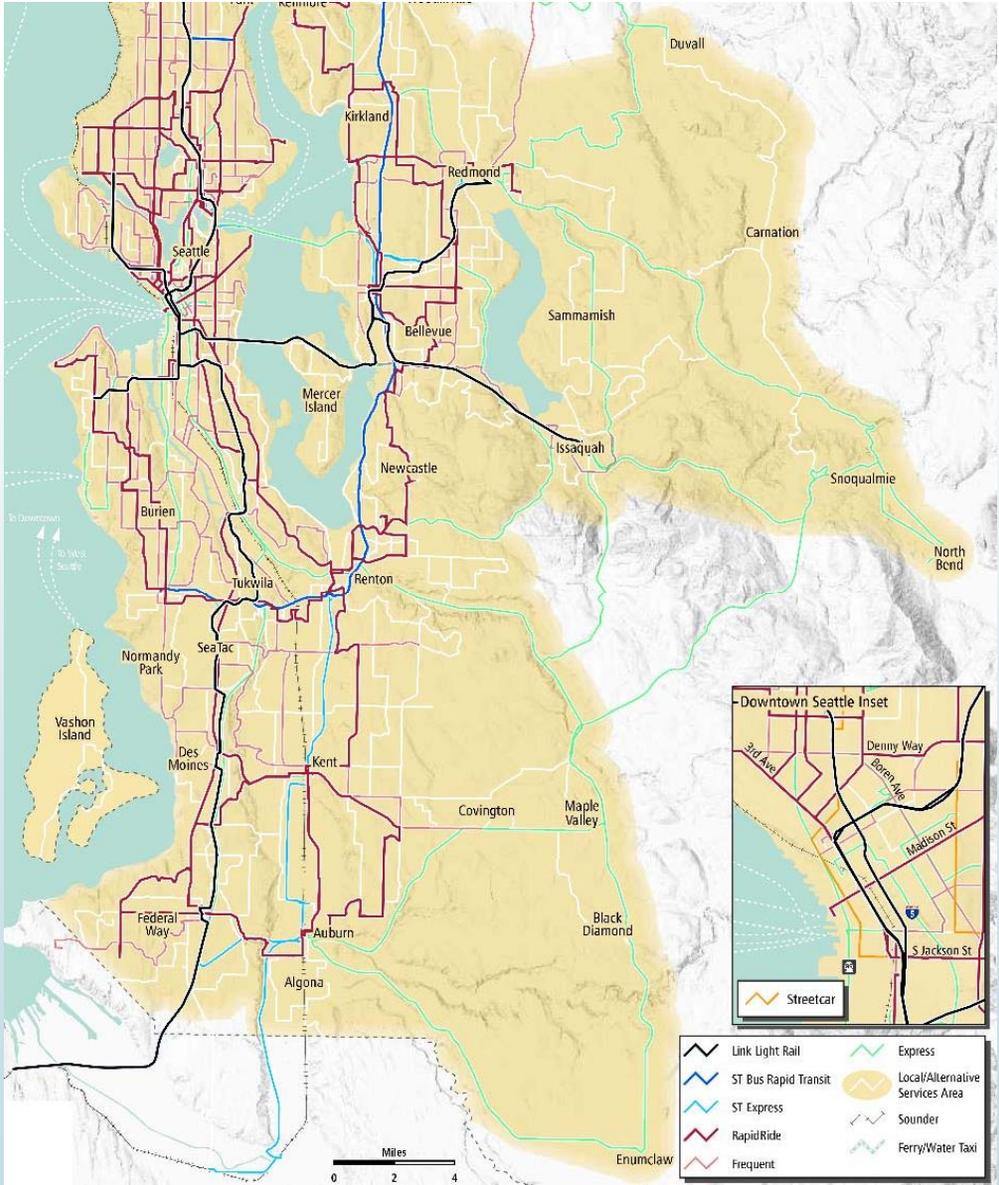
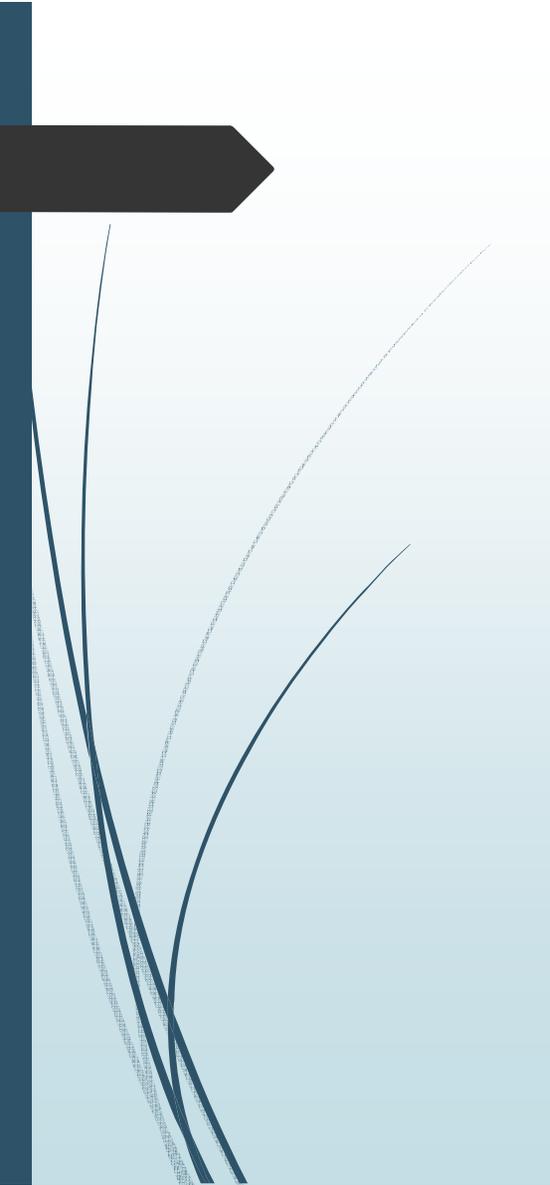


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Visual Hierarchy

- Now that we've covered how to create the background and foreground of our maps, let's assign visual hierarchy to the foreground information.
- Visual hierarchy is the process of assigning levels of importance to your foreground data.
- Example: What are the most critical parts of your map, in order from most important to least important.





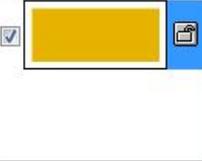
Symbol Property Editor

Preview



100%

Layers



Properties:

Type: Gradient Fill Symbol

Units: Points

Intervals: 22

Style: Buffered

Percentage: 3

Color Ramp

Angle: 90

Style:

Outline...

OK

Layer Properties

General Source Selection Display Symbology Fields Definition Query Labels Joins & Relates Time HTML Popu

Scale symbols when a reference scale is set

Transparent: 67 %

Field: name

Expression...

Show MapTips using the display expression

Hyperlinks

Support Hyperlinks using field:

none

Document

URL

Script

Edit...

Feature Exclusion

The following features are excluded from drawing:

Feature ID name

Restore Drawing

Restore All

OK

Cancel

Apply



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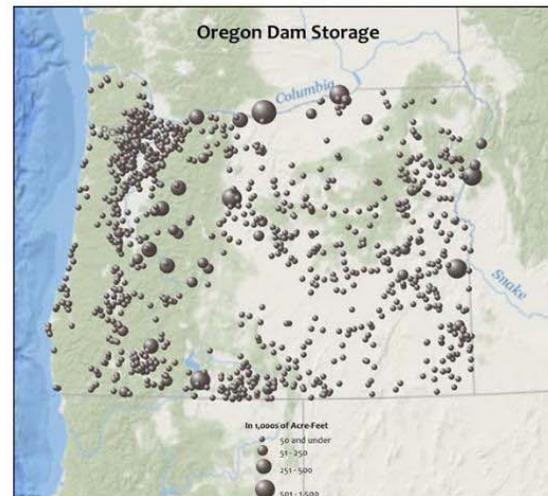
October 2013

Use Feathering to Accentuate the Area of Interest in Your Map

By Aileen Buckley
Esri Cartographer

Tweet 645 Share 329 share 2159

Feathering is a technique that makes the area you want to highlight on your map stand out. This helps your map readers focus on the area that's important on the map. With feathering, you can fade a dark edge of any color into the background. In the first map below, only the data gives you a clue about the area of interest. In the second map, the feathered edge makes the area of interest stand out.

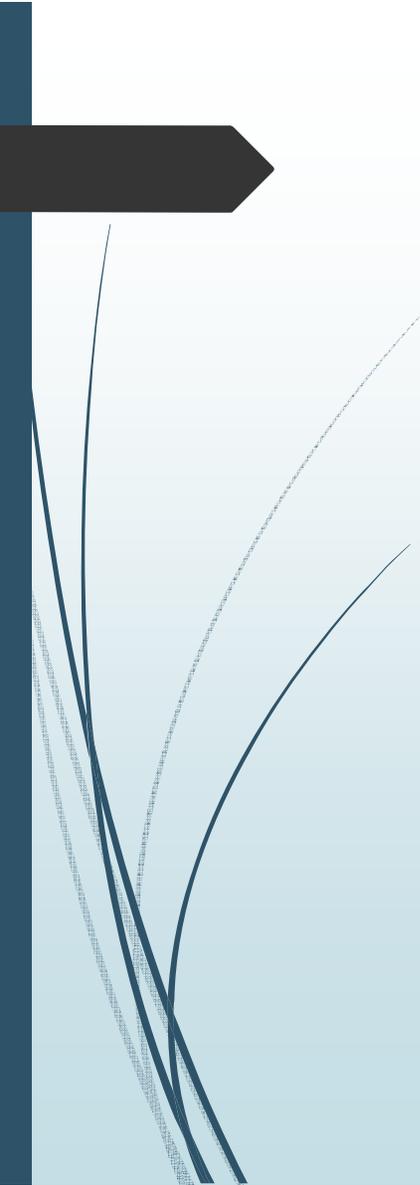


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<http://www.esri.com/esri-news/arcwatch/1013/use-feathering-to-accentuate-the-area-of-interest-in-your-map>



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Visual Hierarchy cont...

- Always be thinking about your message(s) or story you want to get across.
- The longer your reader has to spend figuring out the map message or story, the higher risk you run of them losing interest, or not wanting to figure out what it is that you're trying to communicate.



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Color Theory & Use of Color

- “Color ... is used to heighten the experience without conscious awareness”
– *Donald Norman, Emotional Design*
- Cartographic “rules”, standards and generally adopted conventions
- Think outside the box, choose colors based on context, or inspired by known and accepted sources

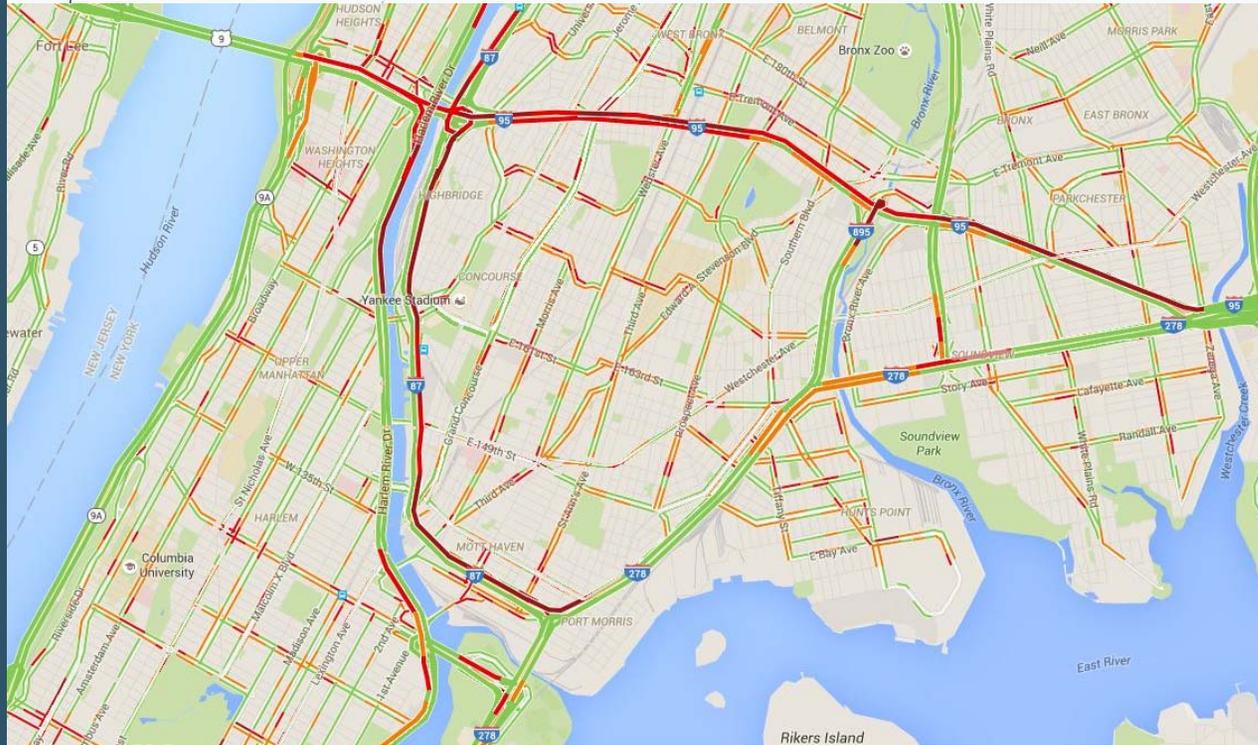
Water is Blue



Water is Blue

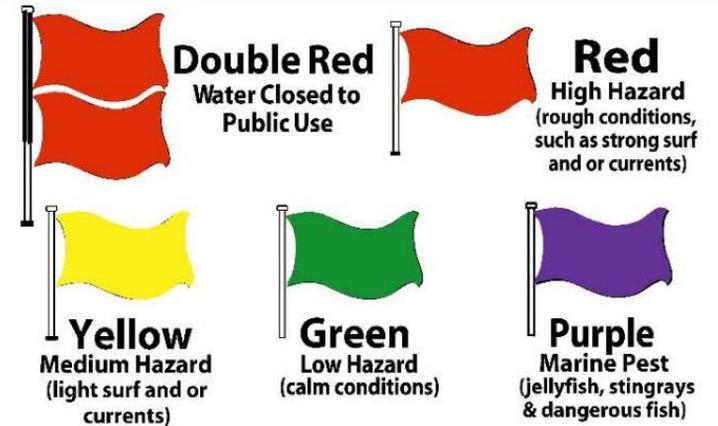


Red is for "Bad"

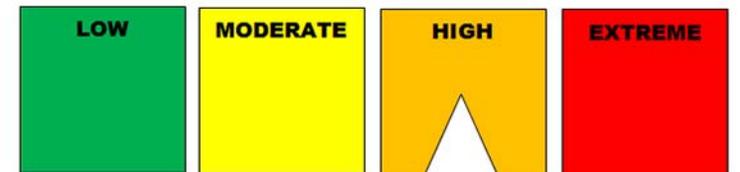


<http://maps.google.com>

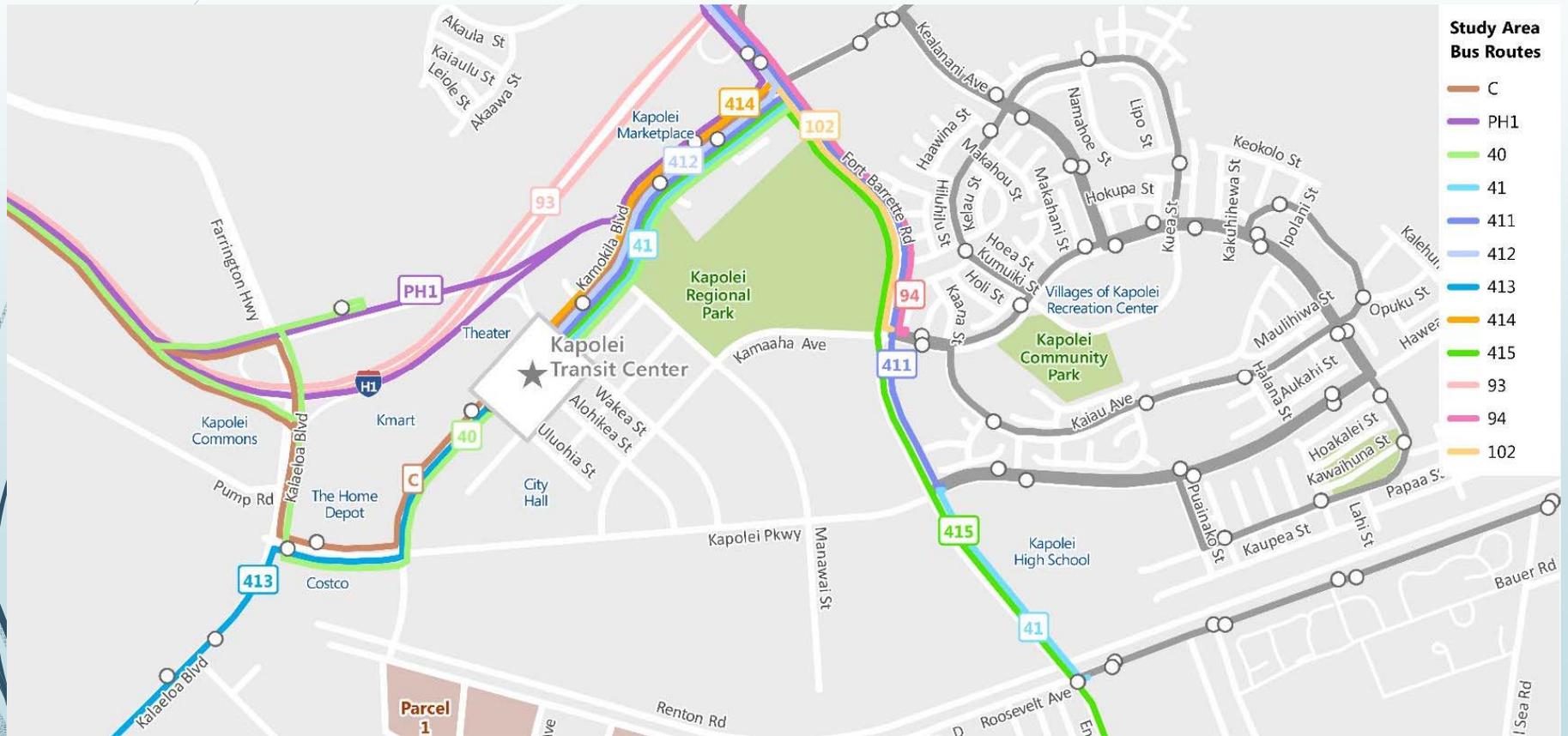
BEACH FLAG WARNING SYSTEM



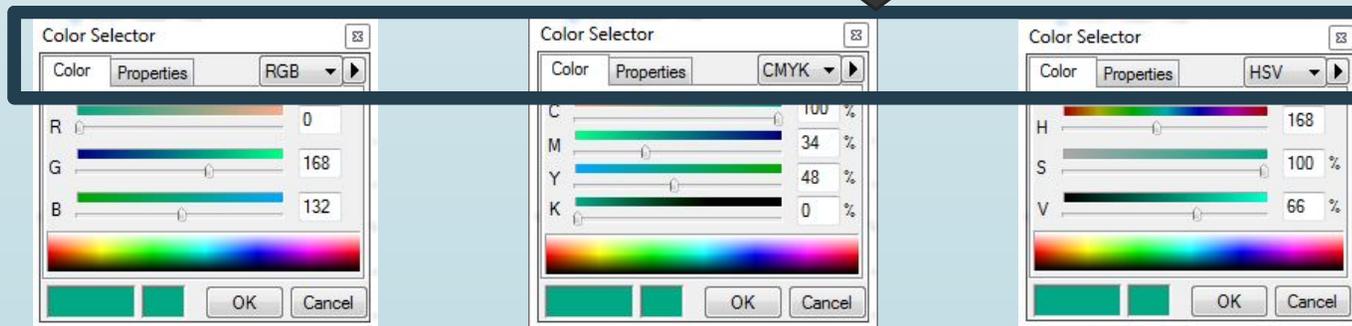
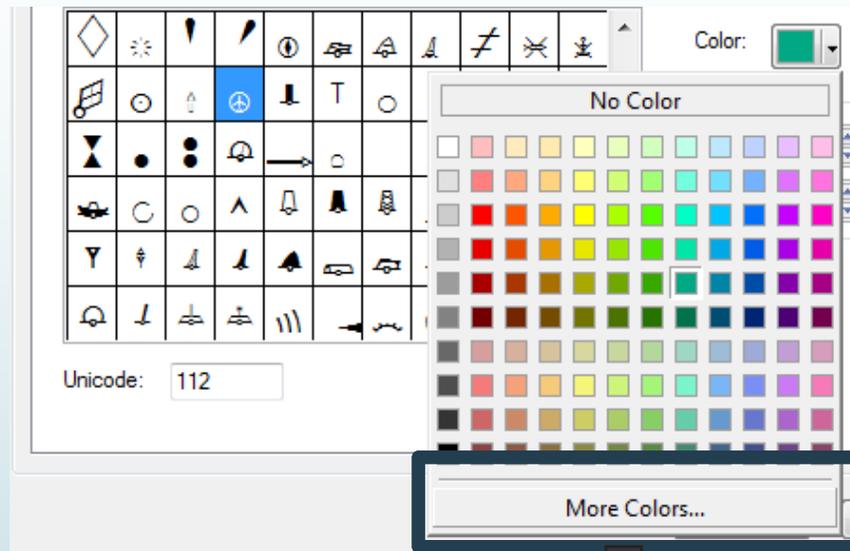
TODAY'S FIRE DANGER RATING



Don't Use Competing Colors, Usually



You Are Not Stuck With Defaults



Gretchen Peterson

"Renowned Cartographer"

- GIS Certification Institute



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Cartographer's Toolkit

Cartographer's Toolkit is like a big cheat-sheet for cartography. Its three chapters — Colors, Typography, and Composition Patterns — build from individual map components to cohesive cartographic constructions. Each chapter begins with a brief introduction explaining relevant theory, key definitions, and usage suggestions. The pages that follow each introduction provide an abundance of visual demonstrations that are the basis for the tools in the toolkit.

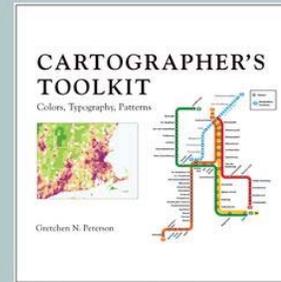
The book contains:

- Colors: 30 color palettes of 10 colors each in 3 categories: coordinated palettes, color ramps, and differentiated;
- Typography: 50 typefaces showcased in 3 categories: standard, free, and for-fee; and
- Composition Patterns: 28 patterns illustrated with 36 maps by many of today's leading cartographers.

Here you will find design tools for the advanced cartographer — and those who wish to become advanced cartographers — for producing the high-level static and interactive maps required in our current innovative environment.

The information presented in this book, along with the more fundamental cartography theory in the author's first book, *GIS Cartography: A Guide to Effective Map Design*, equips cartographers with the tools they need to perform at the top of the map-making field, producing maps that are informative, inspired, and original.

[Buy *Cartographer's Toolkit* Today!](#)



"For any geo-technology professional, would-be cartographer, and mapping aficionado, *Cartographer's Toolkit* is a must-have."

- Glenn Letham, Editor, [GISuser.com](#)

"A book full of little cartographic nuggets."

- Clint Brown,
Director of Software Products, Esri

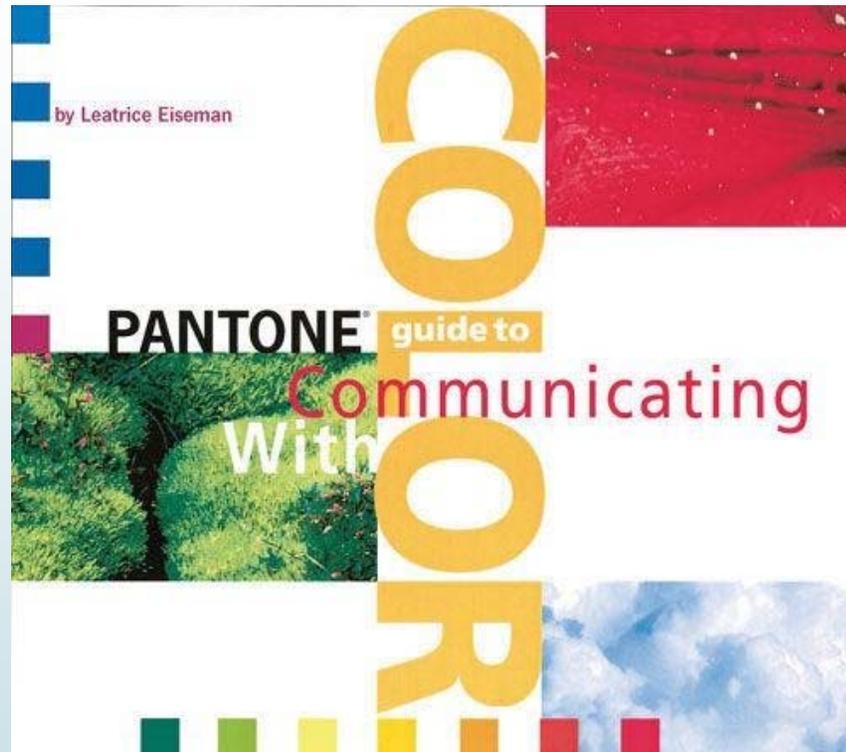
[Read More...](#)

[Buy *Cartographer's Toolkit* Today!](#)

<http://gretchenpeterson.com/cartographers-toolkit.php>



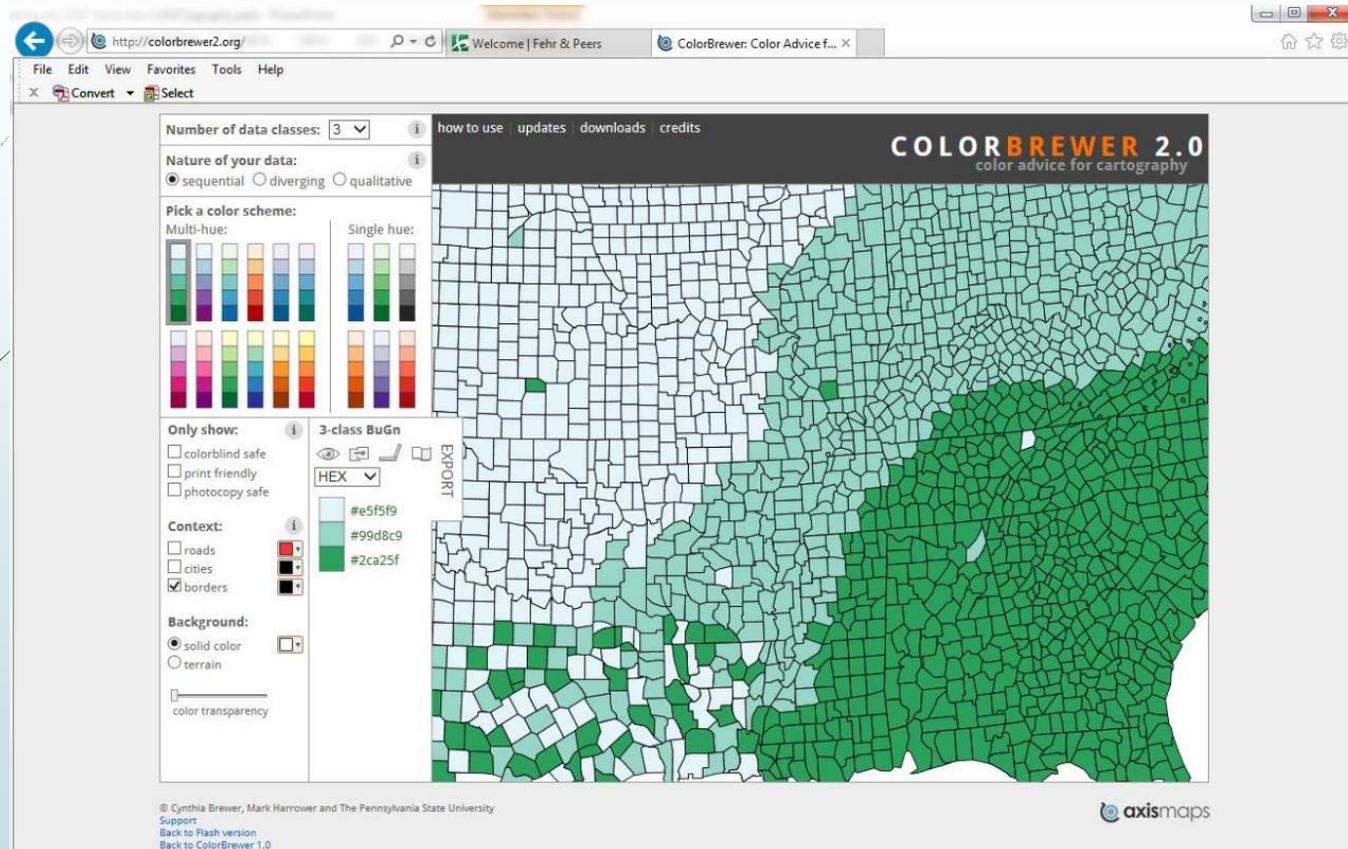
www.printmag.com/color/100-years-color-beautiful-color-combinations-20th-century/



www.colorexpert.com/books-by-leatrice/pantone-guide-to-communicating-with-color/

Color Brewer 2.0

Color Advice for Cartography

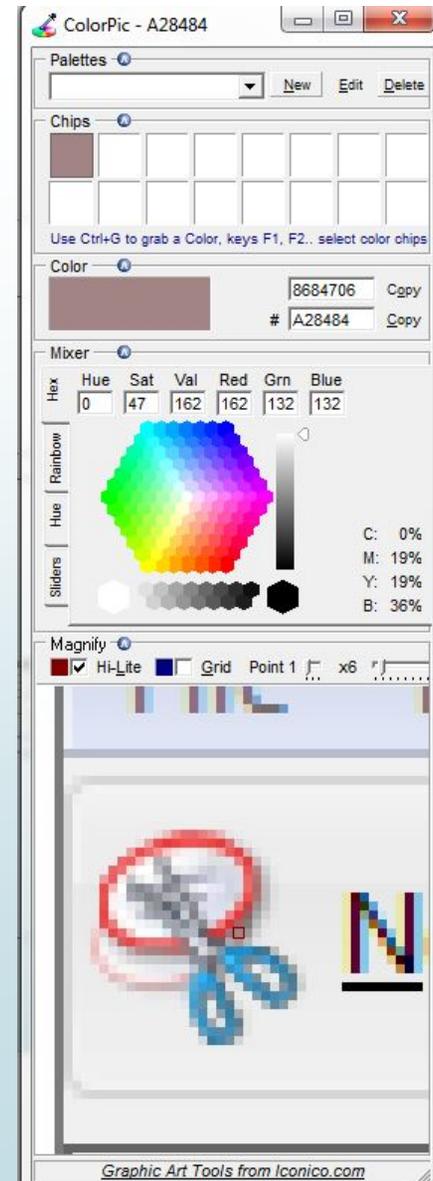


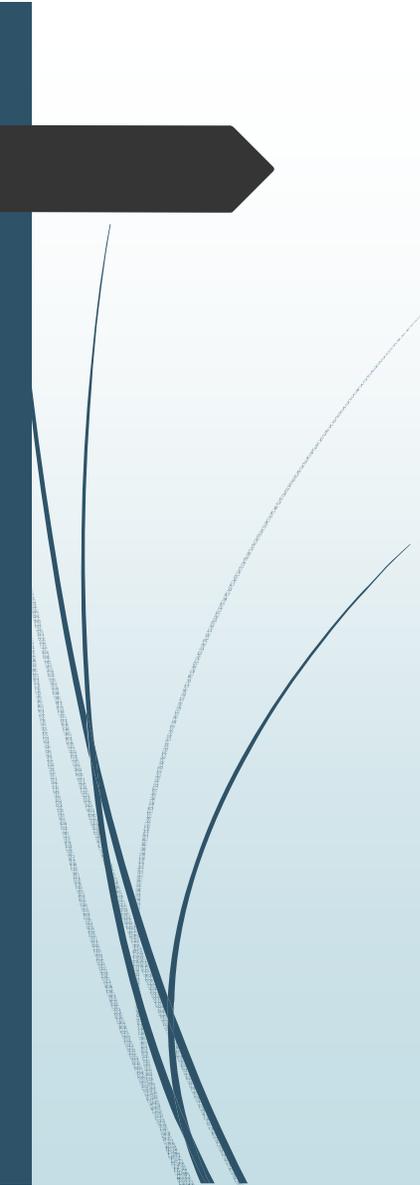
<http://colorbrewer2.org/>

Handy Tool – Colorpic

Iconico.com

Allows you to get RGB, HSV, and CMYK color breakdowns for items you see on screen.





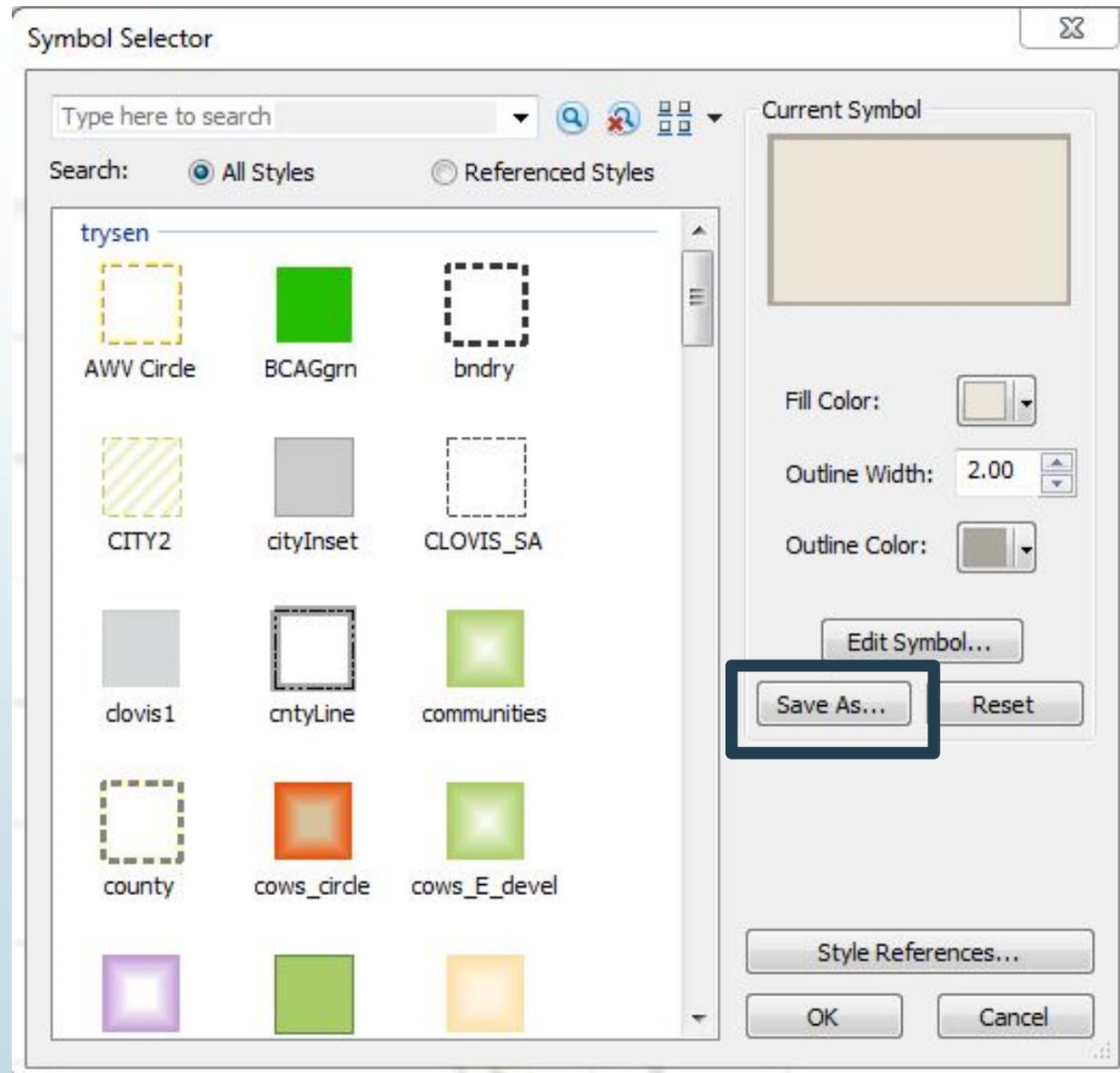
C[ART]elements

Custom Symbology & Fonts

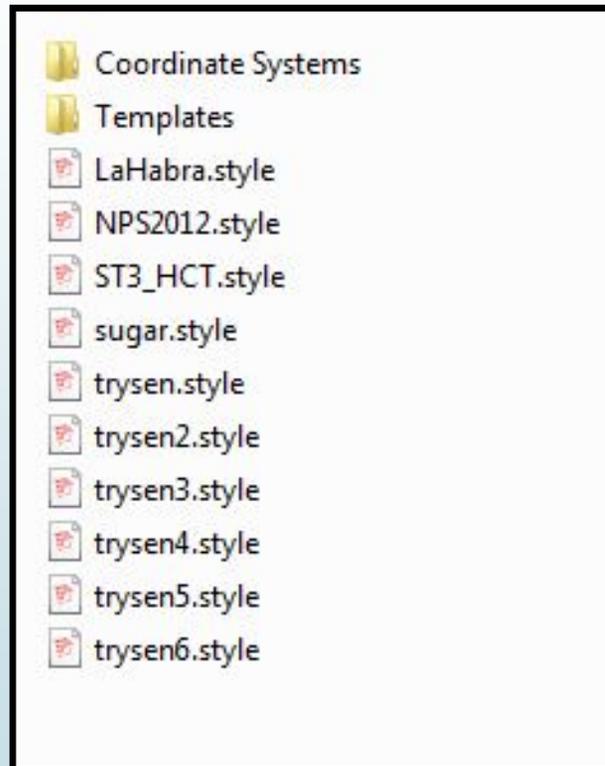
- What is a styles library, and how do I save things I create there?
- You can avoid using default symbology by saving and reusing your customized your symbols in the symbol selector window.

Save Custom Symbols

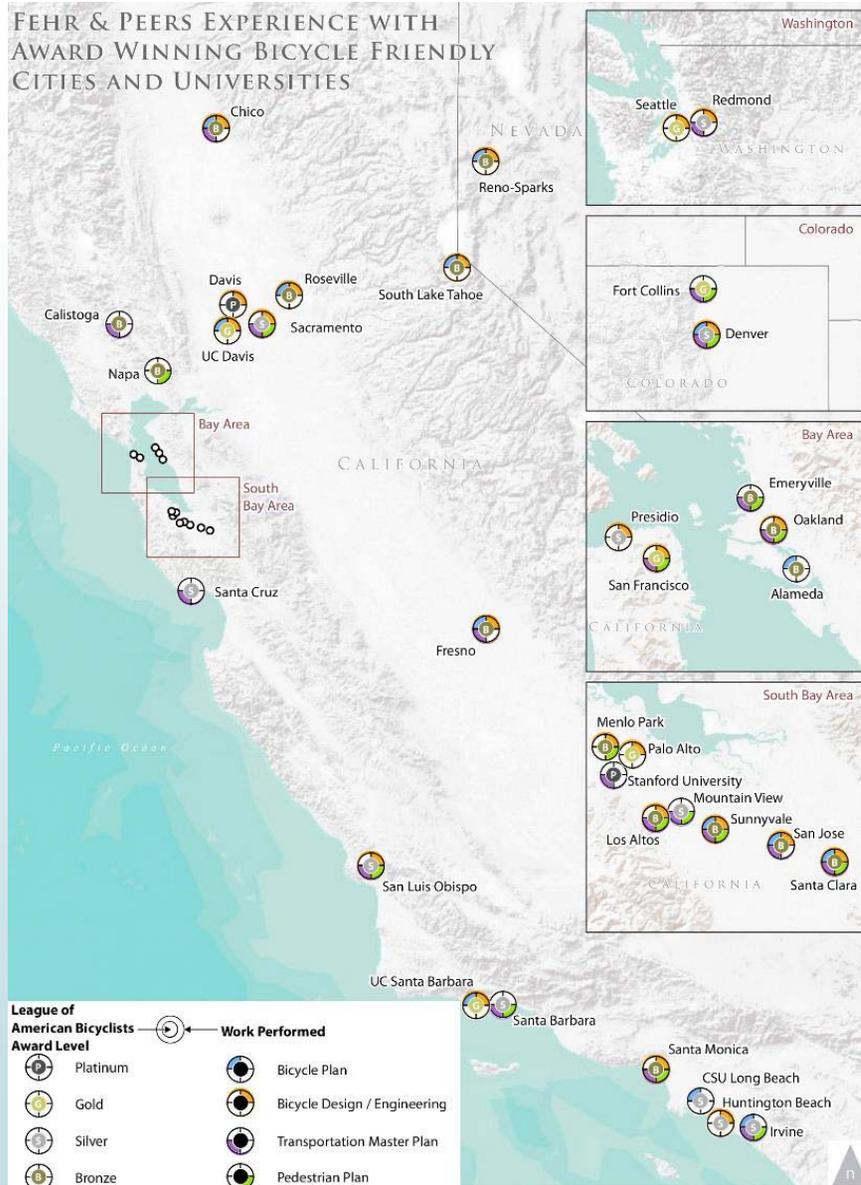
Customized Styles files are saved on your respective C:\ Drives



➤ C:\Users\trysen\AppData\Roaming\ESRI\Desktop10.3\ArcMap



FEHR & PEERS EXPERIENCE WITH AWARD WINNING BICYCLE FRIENDLY CITIES AND UNIVERSITIES



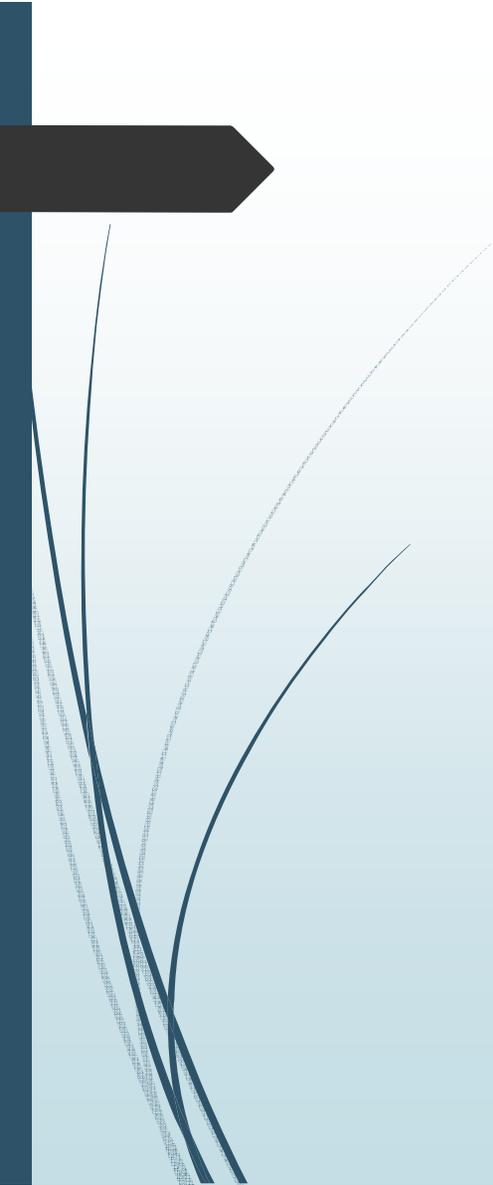
League of American Bicyclists — **Work Performed**

Award Level

- Platinum
- Gold
- Silver
- Bronze

Work Performed

- Bicycle Plan
- Bicycle Design / Engineering
- Transportation Master Plan
- Pedestrian Plan



**League of
American Bicyclists
Award Level**



Work Performed



Platinum



Gold



Silver



Bronze



Bicycle Plan



Bicycle Design / Engineering



Transportation Master Plan



Pedestrian Plan

awardWinning_select

tag



1



2



3



4



5



6



7



8



9



10



11

Symbol Property Editor

Preview:

Properties:

Type: **Character Marker Symbol**

Character Marker | Mask

Units: Points

Size: 19.5

Angle: 0.00

Color:

Offset: X: 0.0000, Y: 0.0000

OK Cancel

Symbol Selector

Type here to search

Search: All Styles Referenced Styles

trysen

tvu	losDst	losUnsigDst
intXing	intcol	default point
bikeExp	collision	5
10	15	20

Current Symbol:

Color:

Size: 22.00

Angle: 0.00

Edit Symbol...

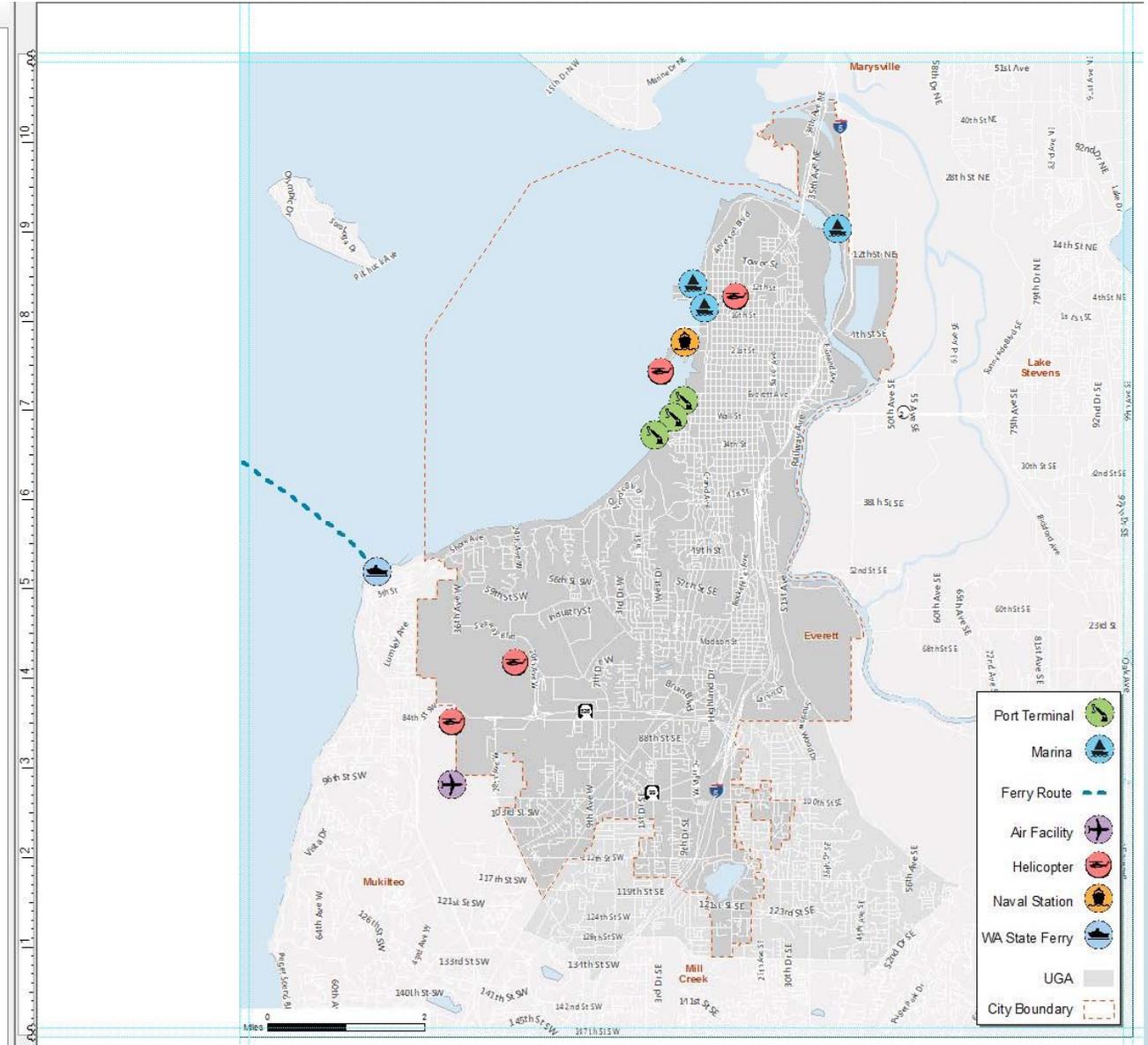
Save As... Reset

Style References...

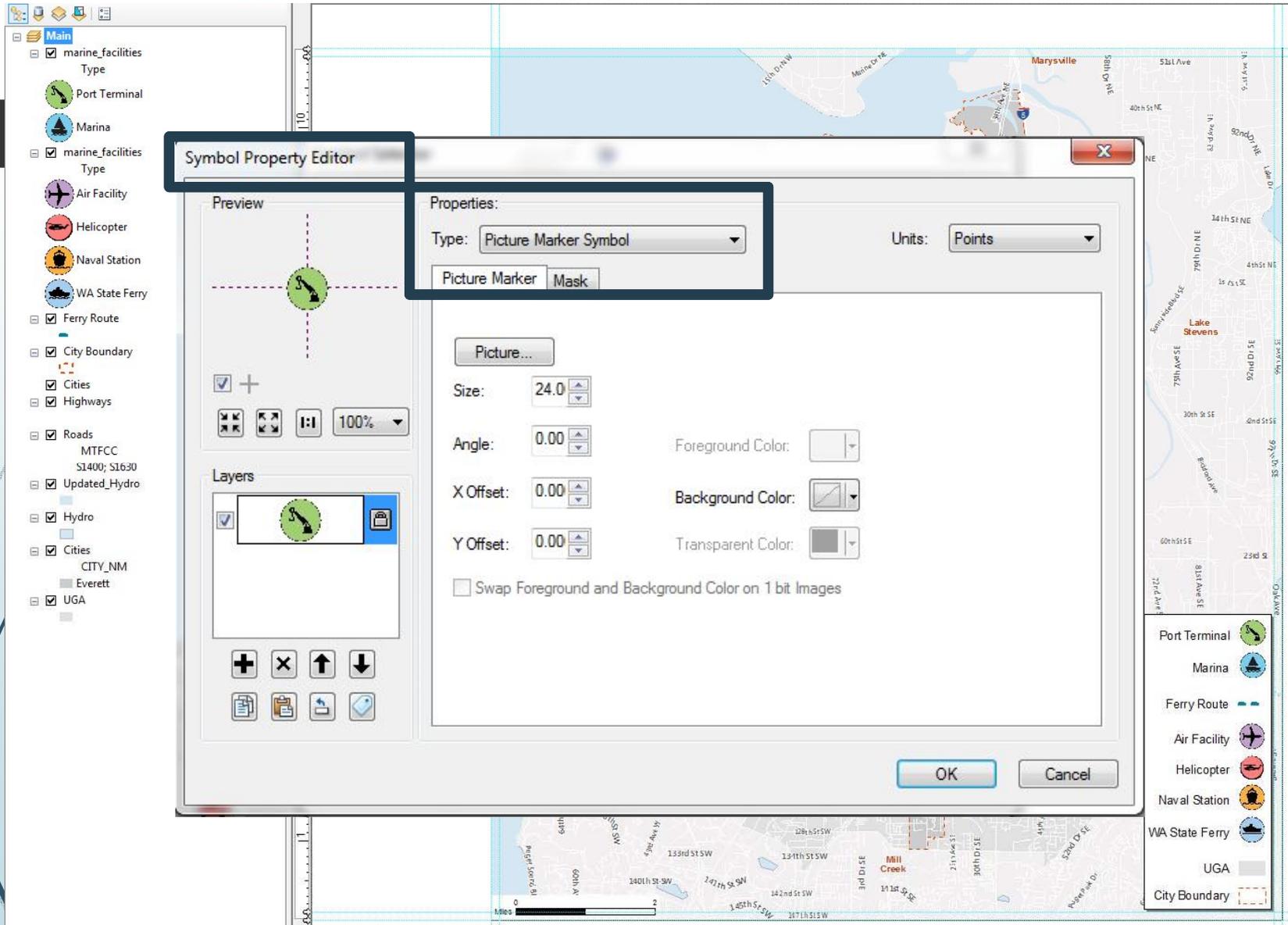
OK Cancel

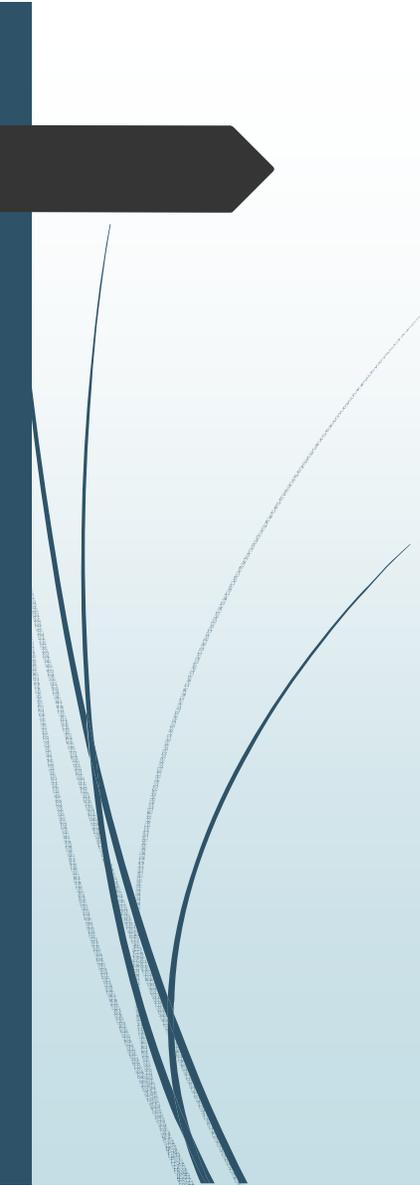


- Main
- marine_facilities Type
 - Port Terminal
 - Marina
- marine_facilities Type
 - Air Facility
 - Helicopter
 - Naval Station
 - WA State Ferry
- Ferry Route
- City Boundary
- Cities
- Highways
- Roads
 - MTFCC
 - S1400; S1630
- Updated_Hydro
- Hydro
- Cities
 - CITY_NM
 - Everett
- UGA



- Port Terminal
- Marina
- Ferry Route
- Air Facility
- Helicopter
- Naval Station
- WA State Ferry
- UGA
- City Boundary

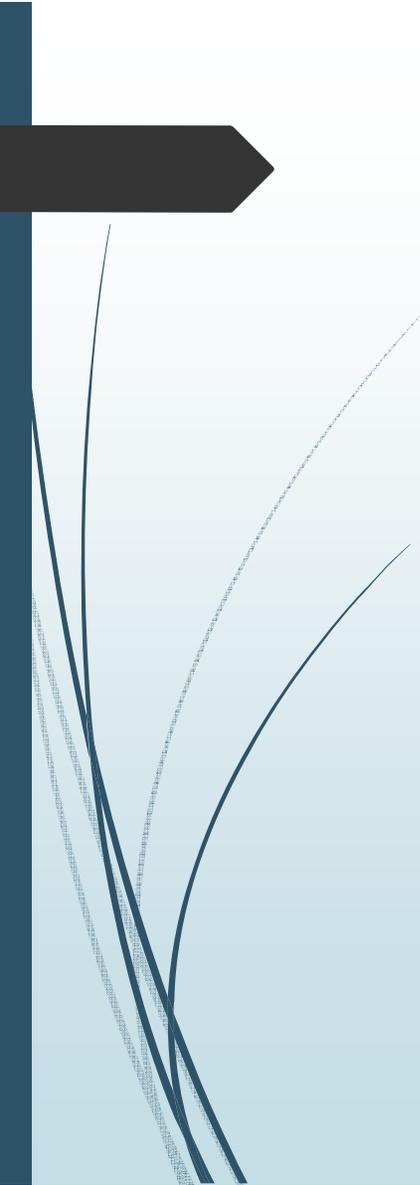




C[ART]elements

Custom Symbology & Fonts cont...

- Create custom elements whenever you can to stand out from the rest.
- Save these custom symbols to your styles file for future use.

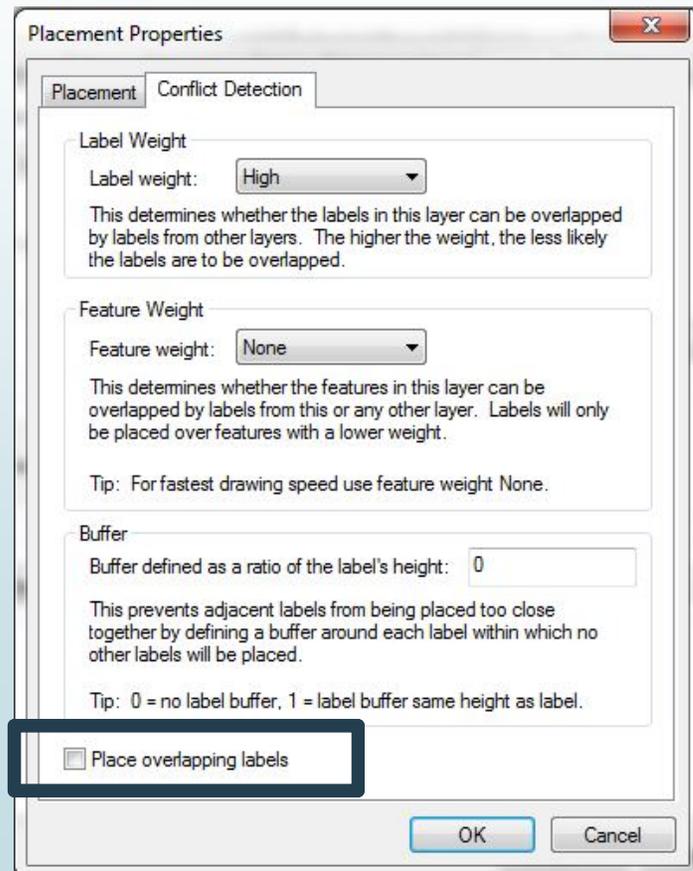


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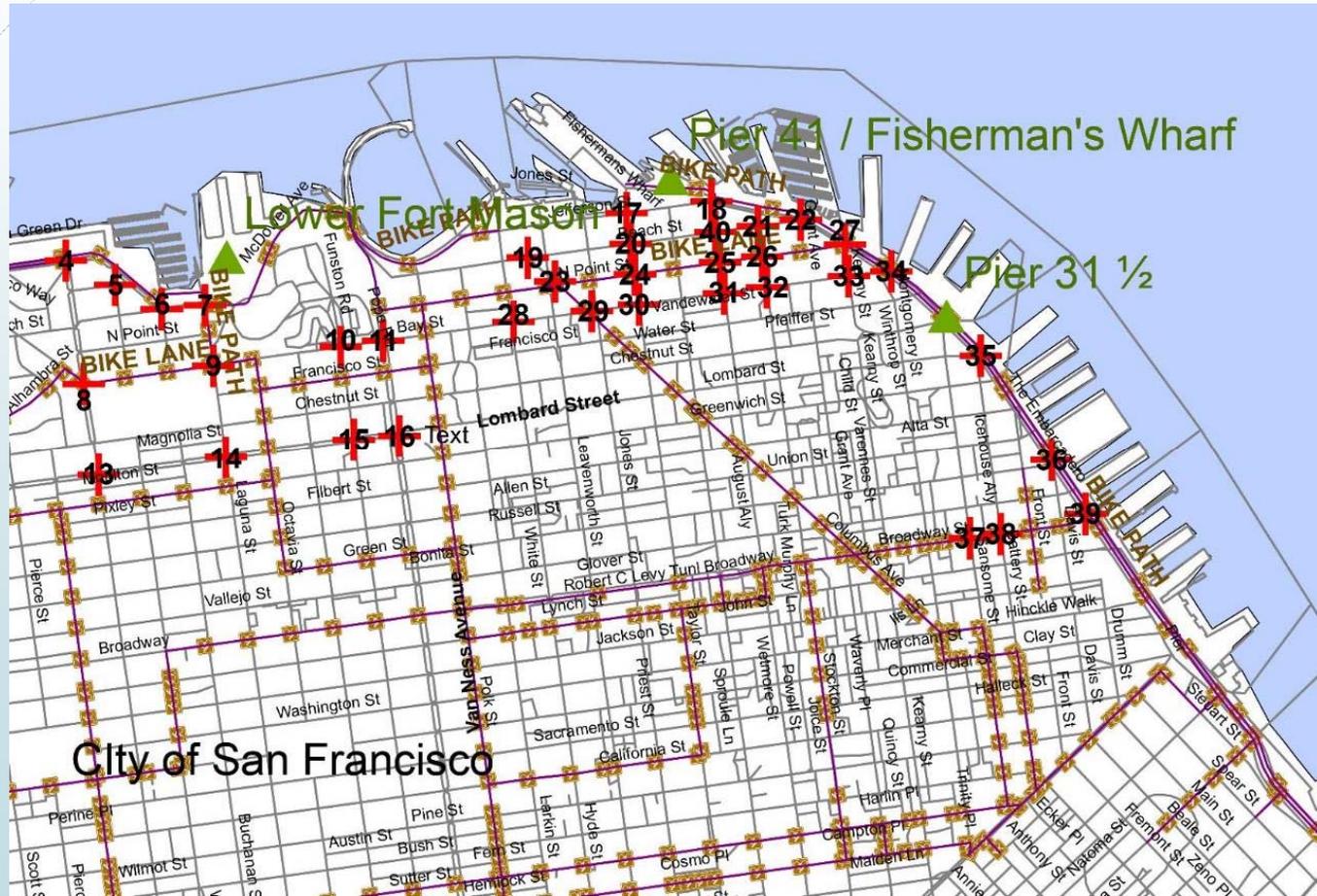
Map Generalization

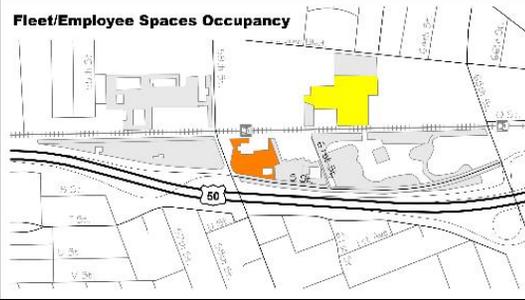
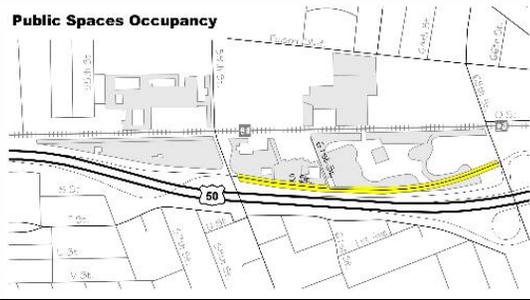
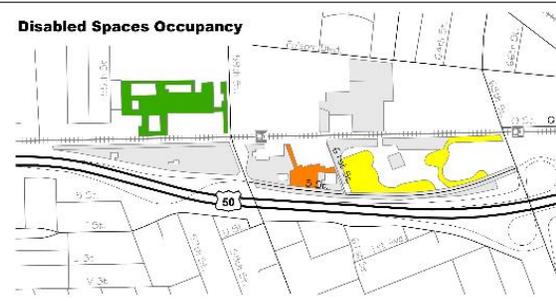
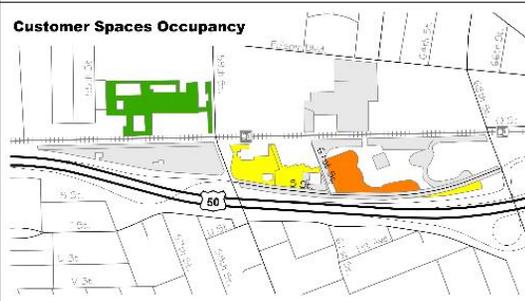
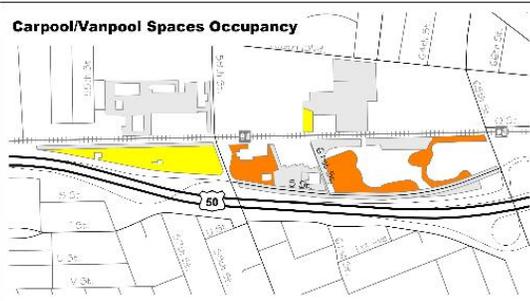
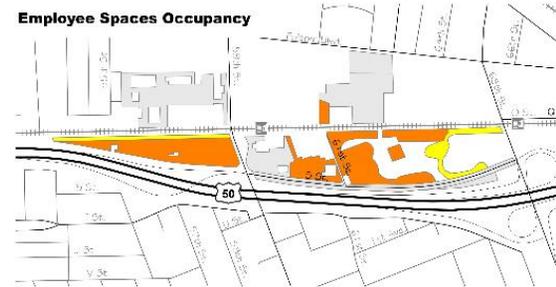
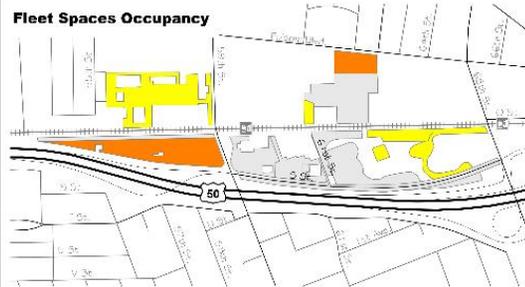
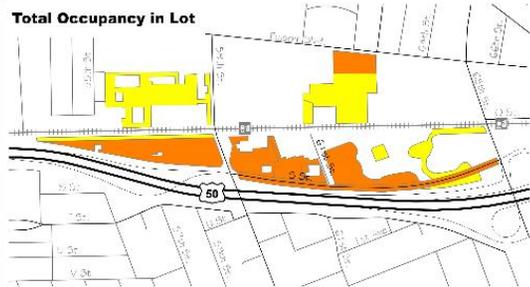
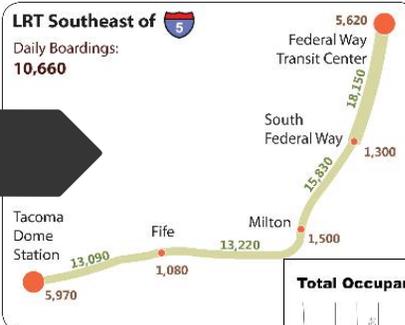
- Be sure not to overdo it!
- Keep your story in mind and be sure your map is telling that story.
- If you don't need it, toss it!

Avoid Clutter, like Overlapping Labels



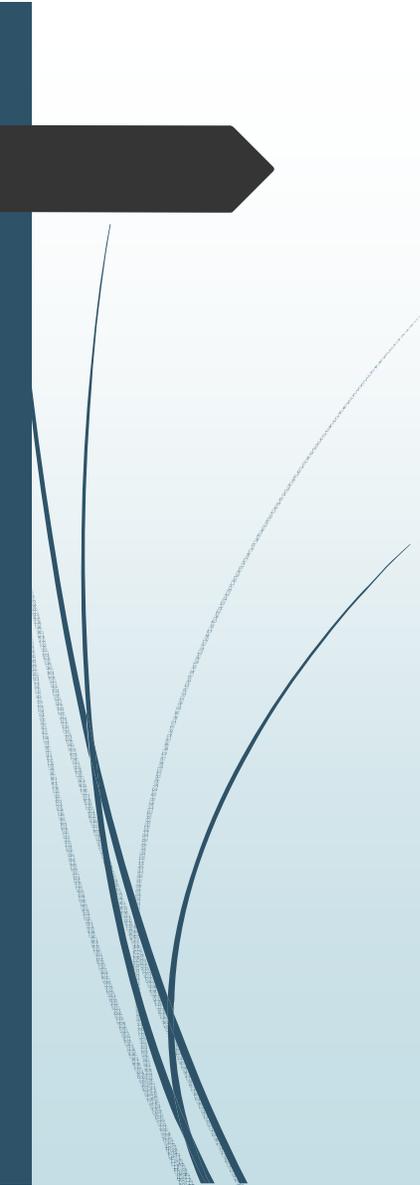
What Story Does This Tell?





Note: Data collected on XXXXX, 2007



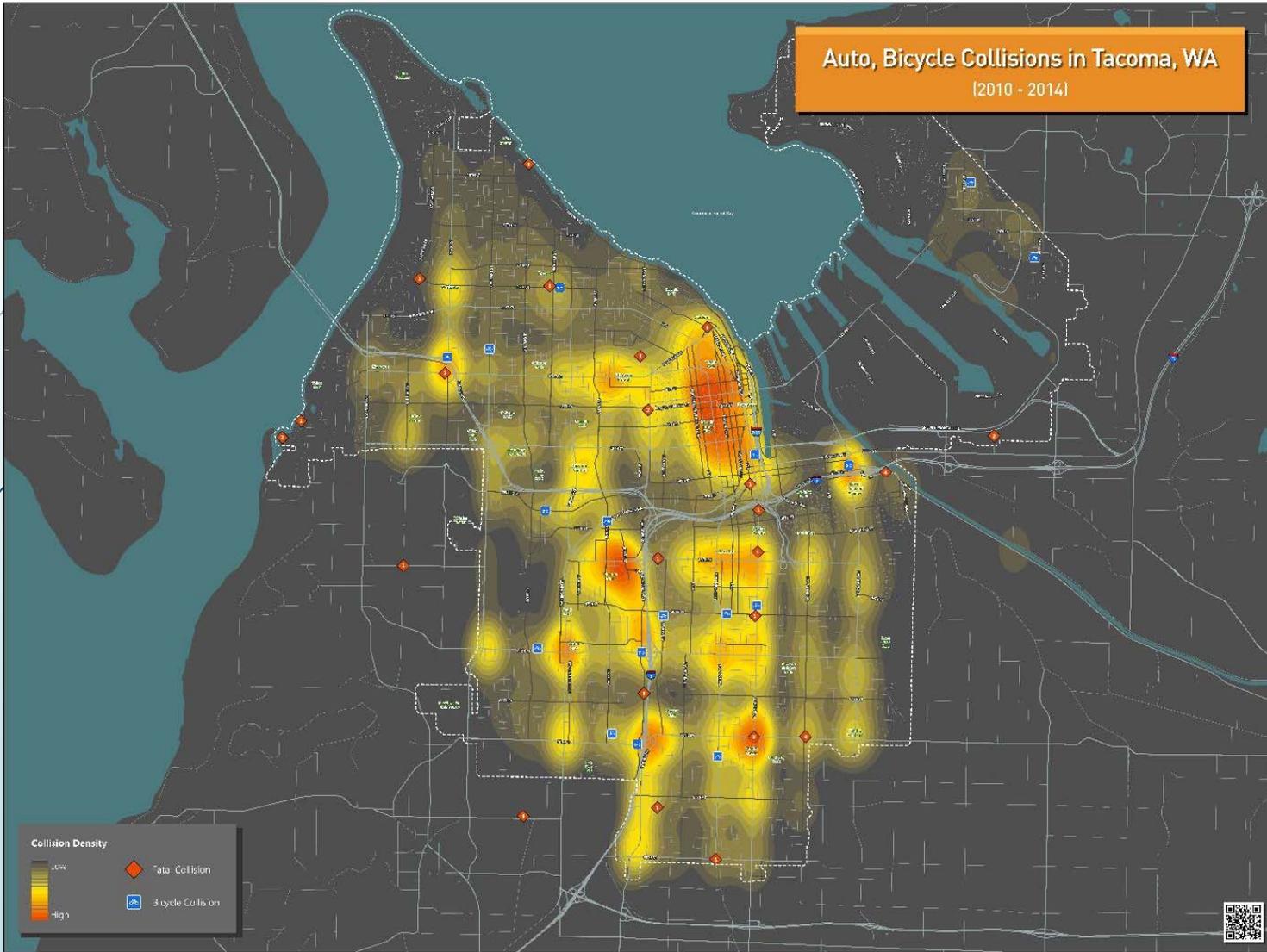


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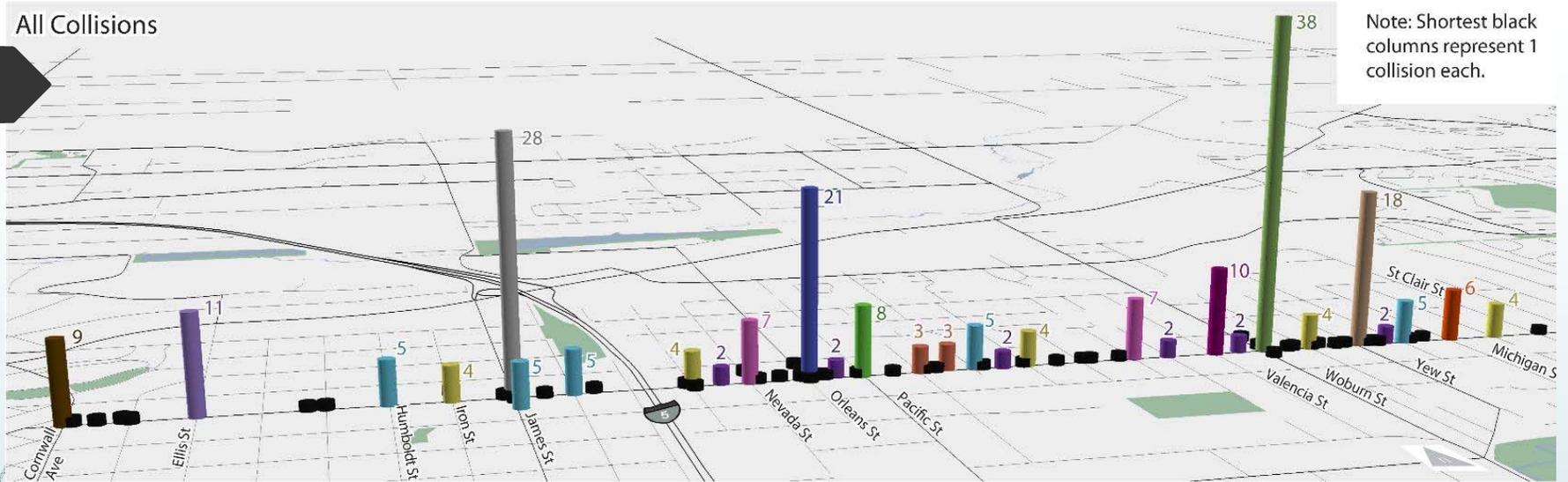
Have FUN!!!

- Break the rules!
- Utilize your extensions and try something new.
- Don't be afraid to get creative and do something different... Think about other ways that you can display your data visually. Go for the '*WOW*' factor!

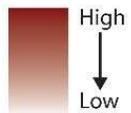
Auto, Bicycle Collisions in Tacoma, WA [2010 - 2014]



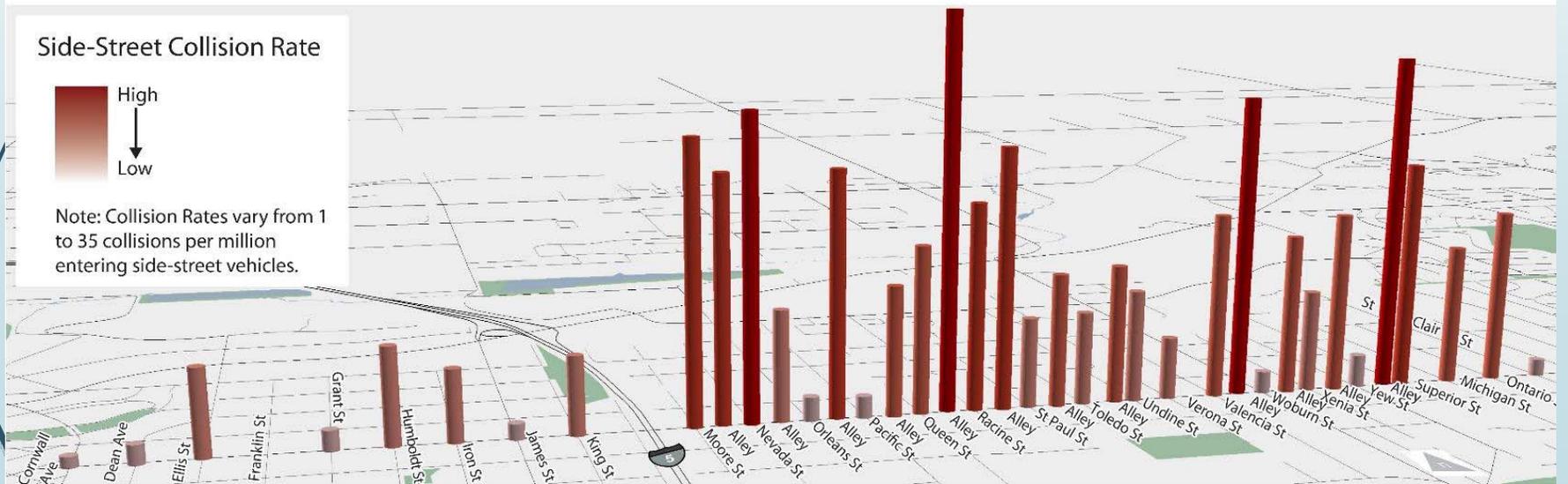
All Collisions



Side-Street Collision Rate



Note: Collision Rates vary from 1 to 35 collisions per million entering side-street vehicles.



MARCH 2016

ite journal

INSTITUTE OF TRANSPORTATION ENGINEERS

EXPANDING OUR HORIZONS
CHANGE. CHALLENGE. OPPORTUNITY.

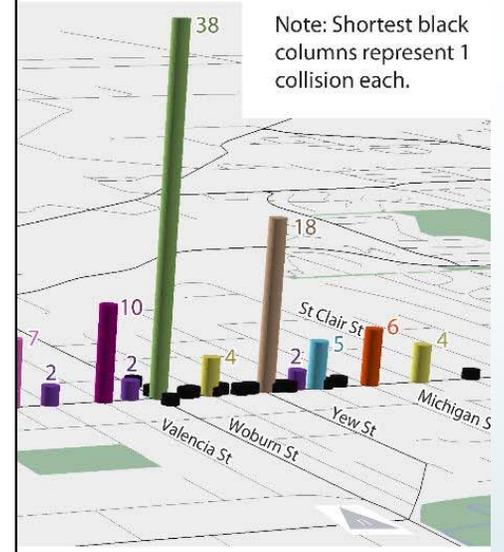
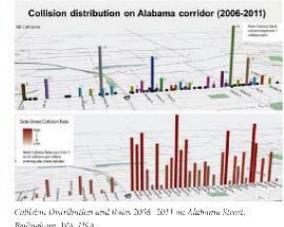
ITE 2016 ANNUAL MEETING & EXHIBIT
August 14-17 • Anaheim, California
www.ite.org/annualmeeting • #iteanaheim

A Road Diet, Safety Improvements, and Public Controversy in the U.S. Pacific Northwest



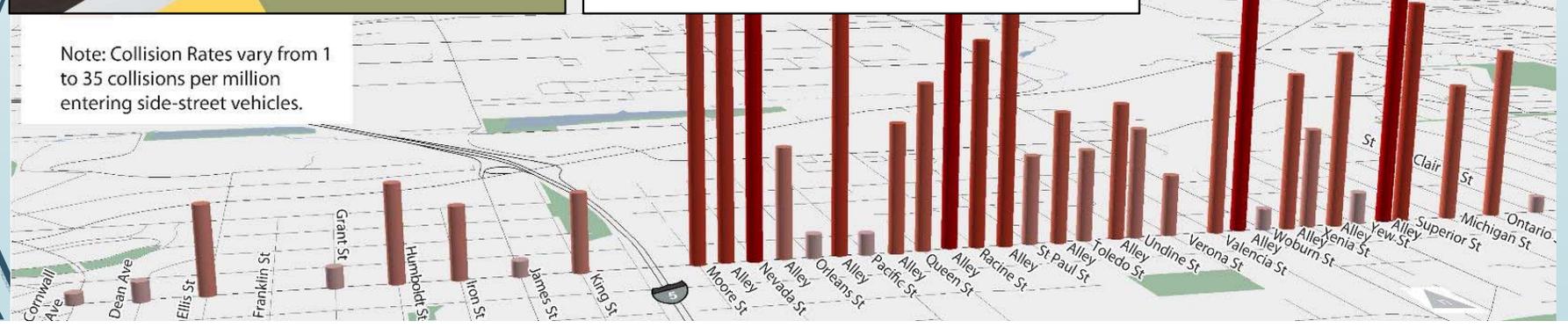
In 2011, Alabama Street, which carries more than 9,000 vehicles per day, was identified as having the second highest vehicle collision rate in Whatcom County behind Guide-Meridian (State Route 230), which carries more than 4,500 vehicles per day between Bellingham and the U.S.-Canada border. From 2006 through 2011, there were 252 vehicle collisions on Alabama Street, 99 (39.3 percent) of which were injury related. In addition to identifying hazards, residents of neighborhoods located on Alabama Street had consistently identified the corridor as a mobility barrier for pedestrians, bicyclists, and transit riders, which was a negative influence on their quality of life.

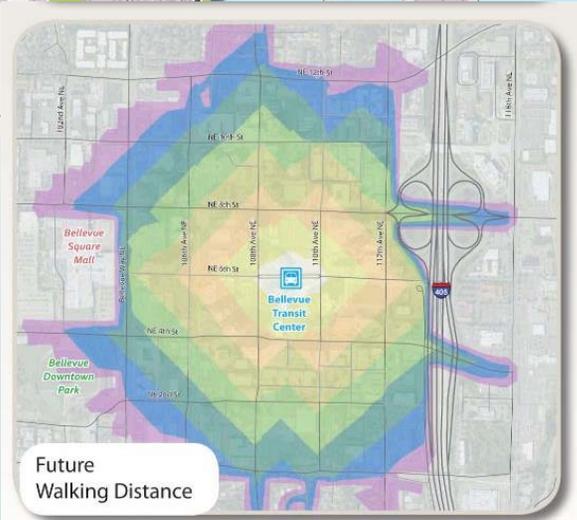
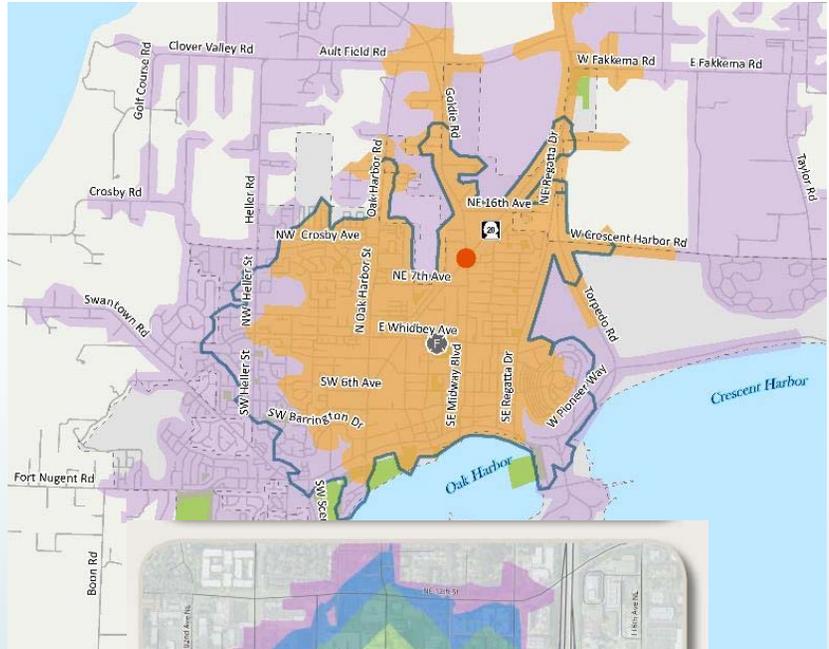
This led city staff working on Bellingham's Pedestrian Master Plan in 2011 to recommend a "Feasibility Study for a Road Diet and Safety Improvements" along the entire Alabama Street corridor. A feasibility study was modeled due to high traffic volumes on Alabama Street, several cross-arterials, many side streets and local access alleyways, closely spaced traffic signals, heavy multi-lane congestion, lengthy vehicle queues, and high-frequency transit bus service provided by Whatcom Transportation Authority (WTA).



Note: Shortest black columns represent 1 collision each.

Note: Collision Rates vary from 1 to 35 collisions per million entering side-street vehicles.



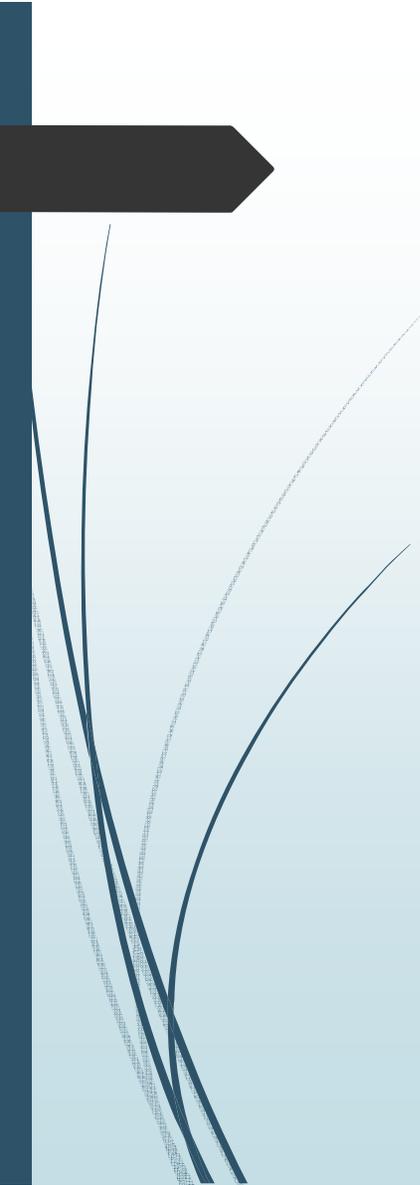




C[ART]elements

Have FUN!!! cont...

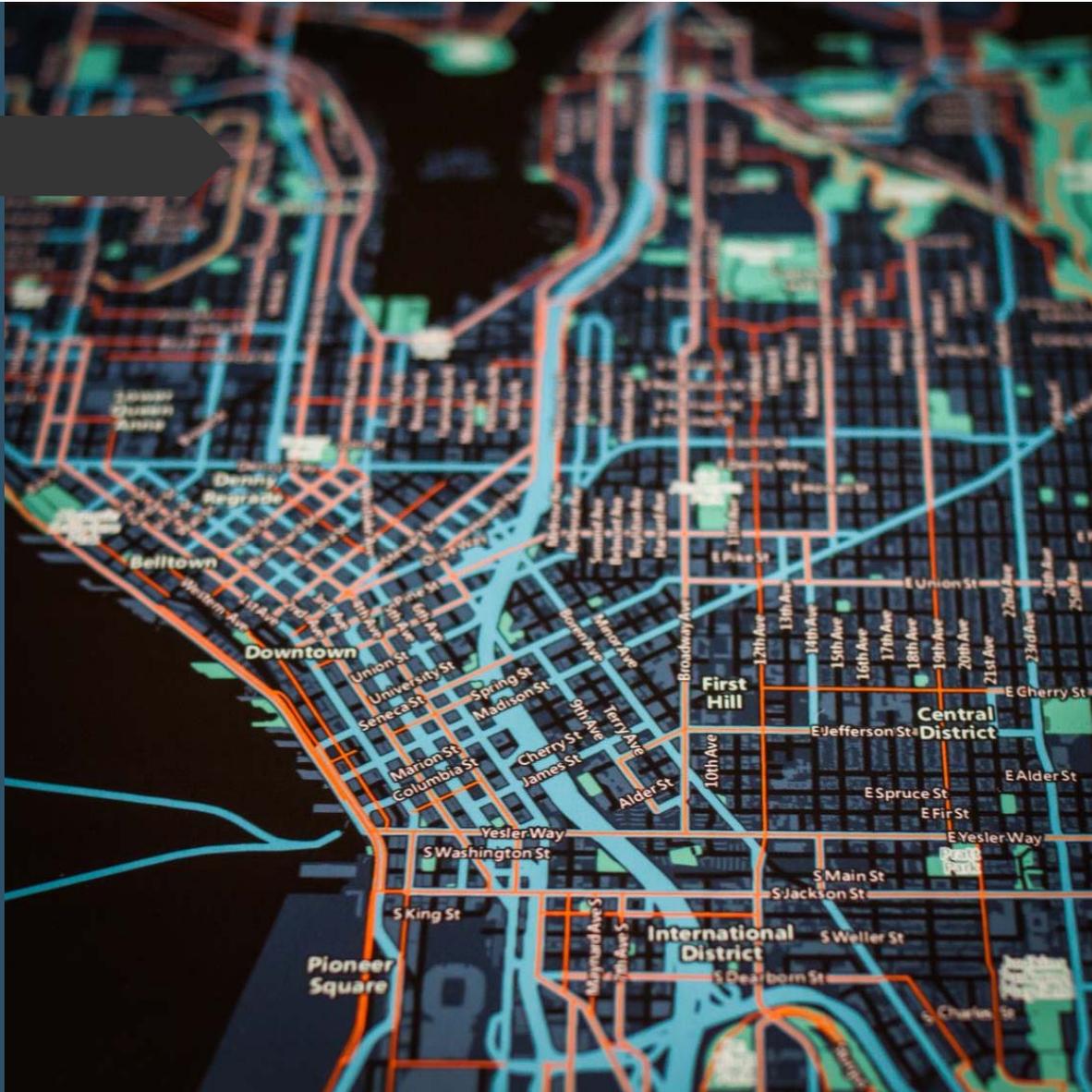
- Always be thinking about new ways to display information to get that '*WOW*' factor!
- Use your ArcGIS extensions whenever possible to display data in different and interesting ways.



C[ART]outline

The Elements: What makes a great map?

- Background vs Foreground
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Thank You!

Tiiki Rysen

t.rysen@fehrandpeers.com

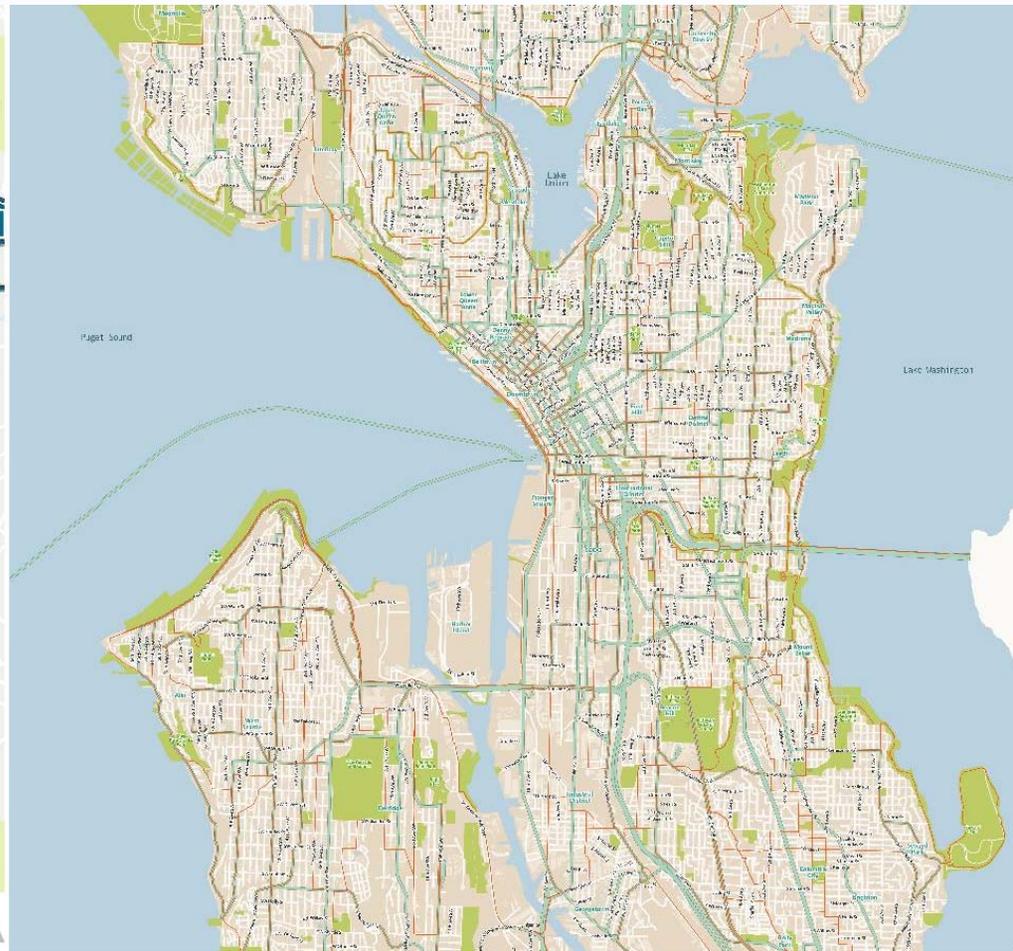
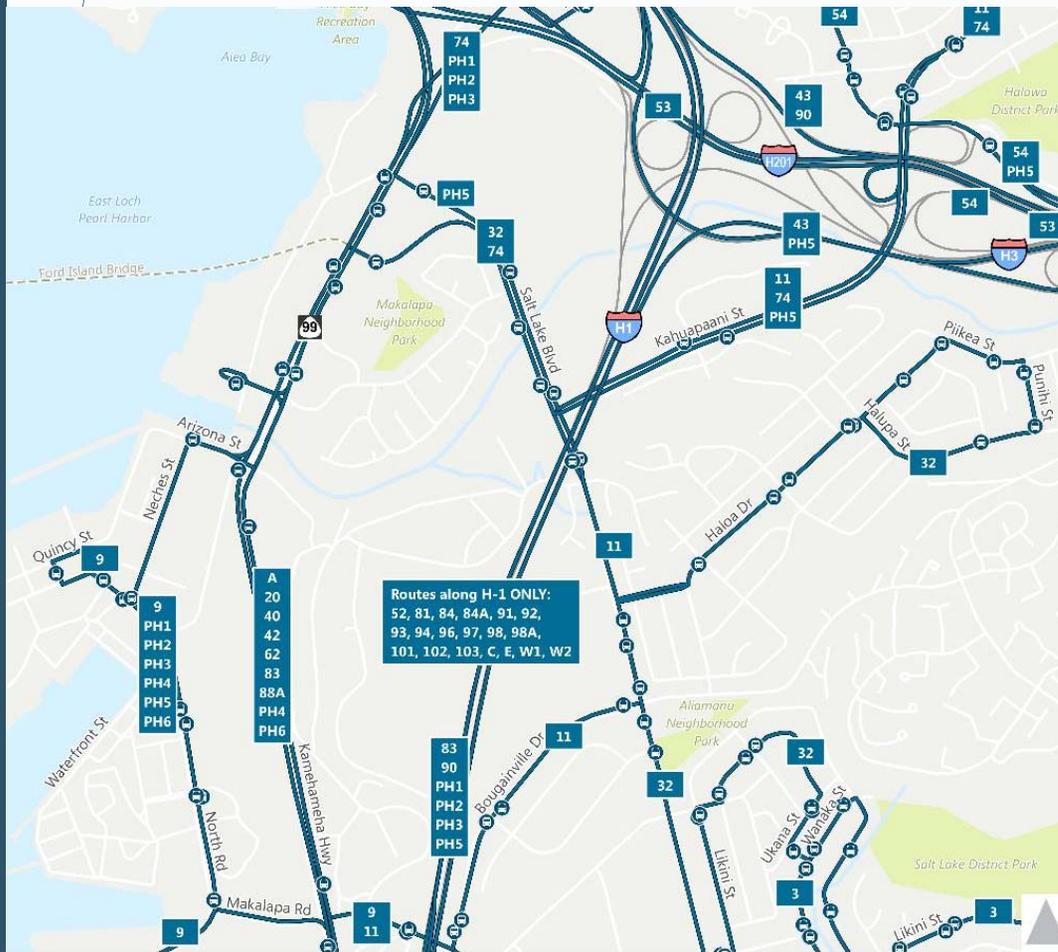
Carrie Carsell

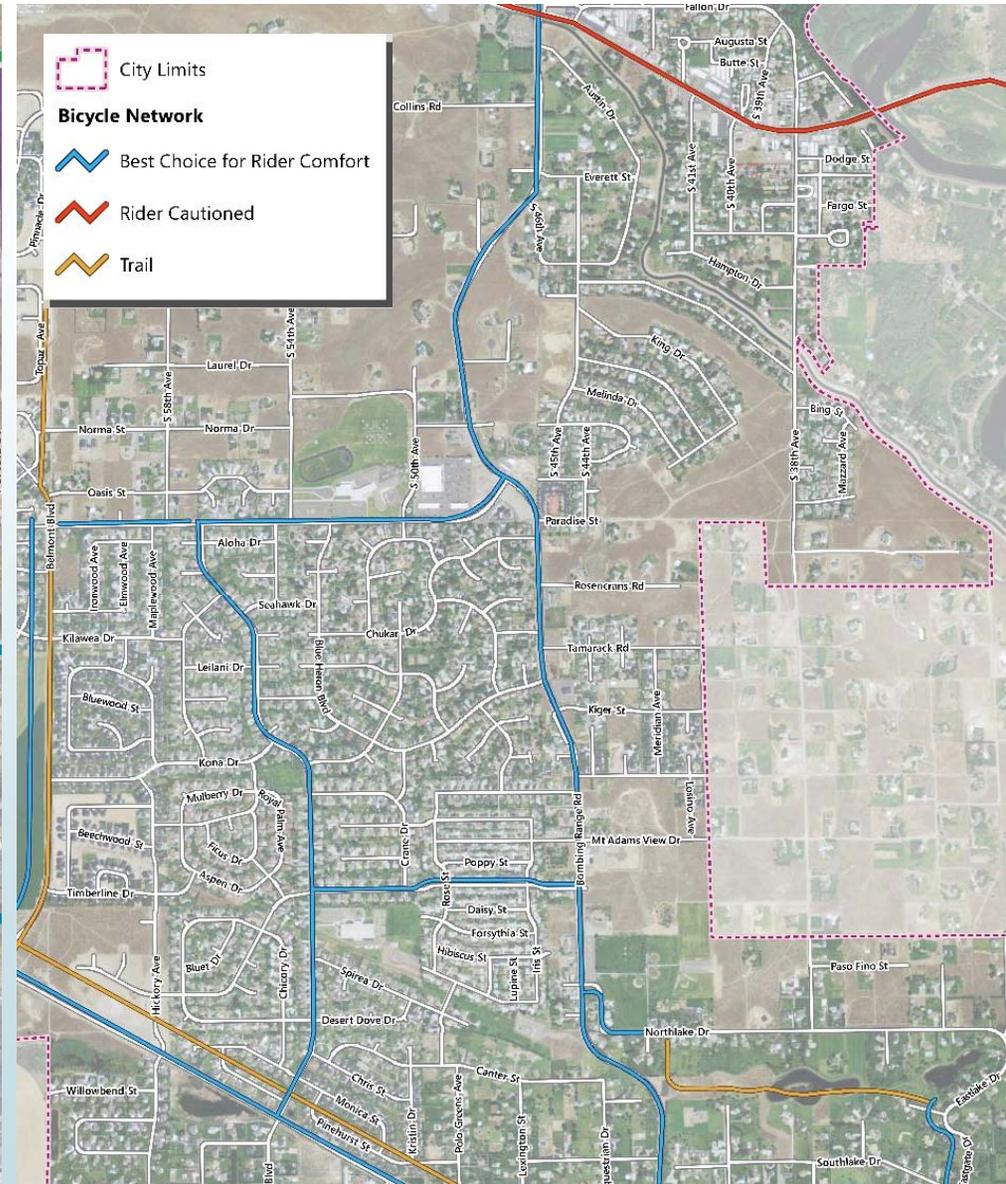
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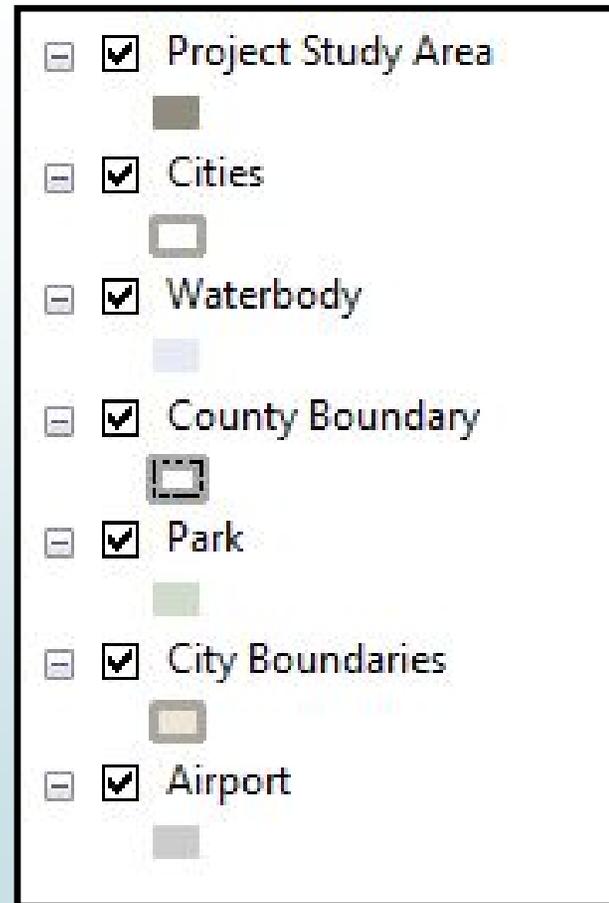
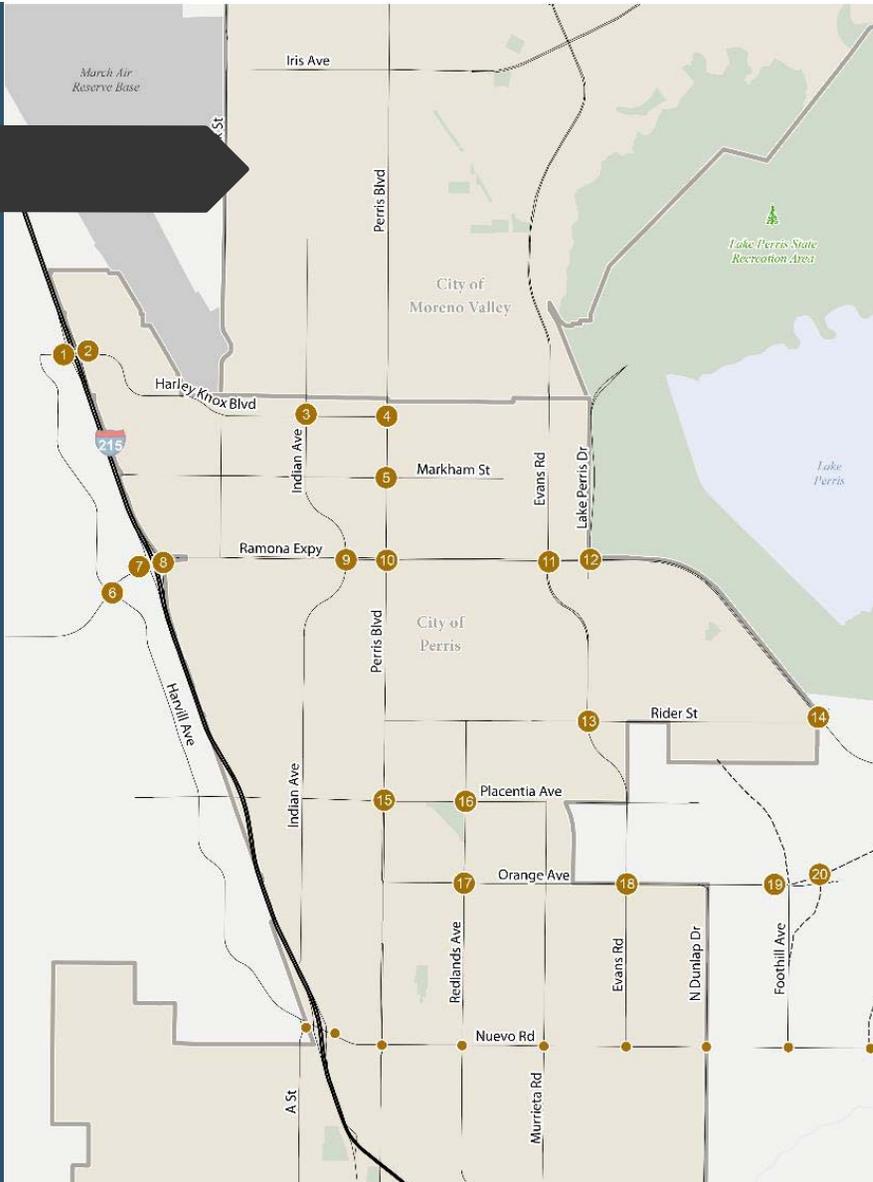
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