

Pinedale Transportation Master Plan

Town Council Update

December 12, 2022

Presented by: Jorgensen and FHU



Goal and Objectives

*The Master Plan study will assess mobility needs and identify actionable near-term and long-term solutions for enhancing safety, accessibility, connectivity, resiliency, and livability within our community. **The goal of the Transportation Master Plan is to use real data and input from the community and Steering Committee to develop data-driven transportation alternatives and recommendations to improve Pine Street and the local transportation network.** These alternatives and recommendations will provide an actionable plan for the community on which to base future transportation decisions.*

Public Feedback & Perceived Issues

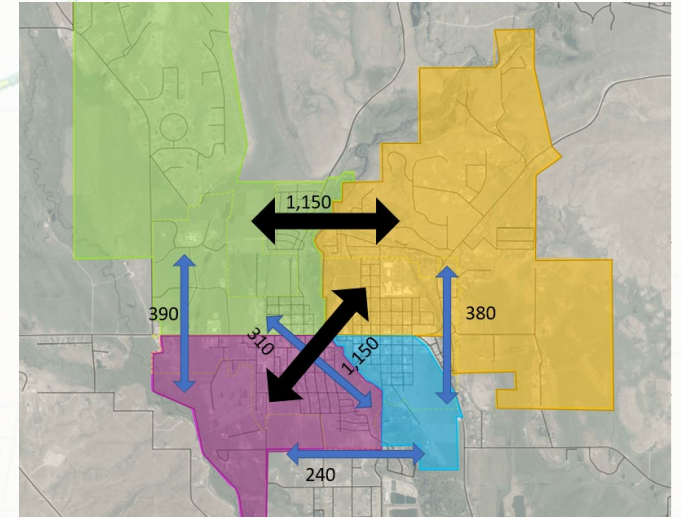
- Left turns on Pine Street
- Trucks and speeding on Pine Street
- Safe sight distances for vehicles turning onto Pine Street
- Pedestrian safety
- Pathway connectivity

Data Sources

- Review available data (WYDOT, Sublette County)
- Bike/Ped Counters
- StreetLight Data (Annual, monthly review)
- Observation
- Workshops

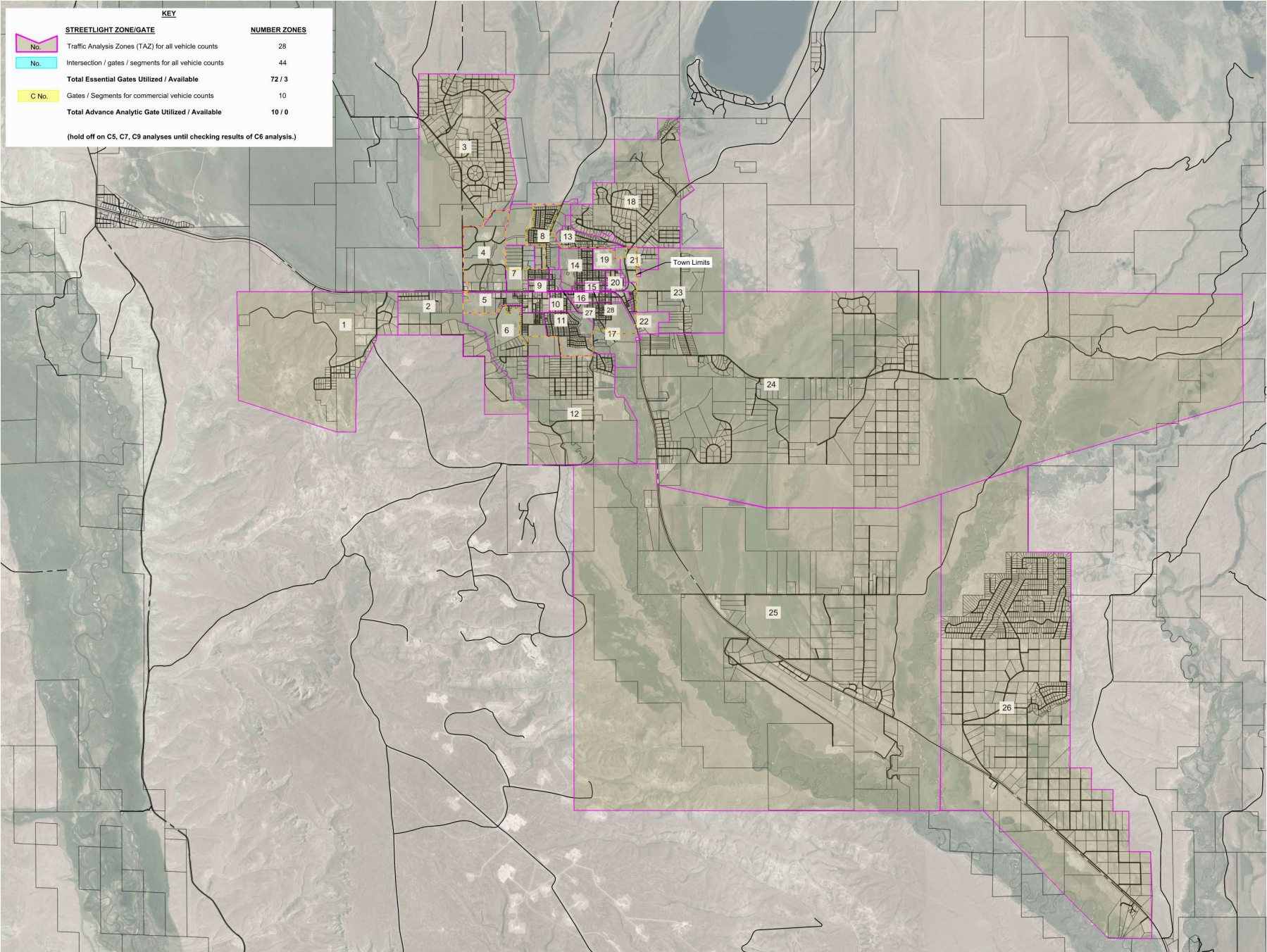
Vehicle Transportation Analysis and Identified Issues

- Local Network connectivity
- Truck traffic
- Pine Street geometry - sight distance and safety
- Speed
- Pine Street capacity

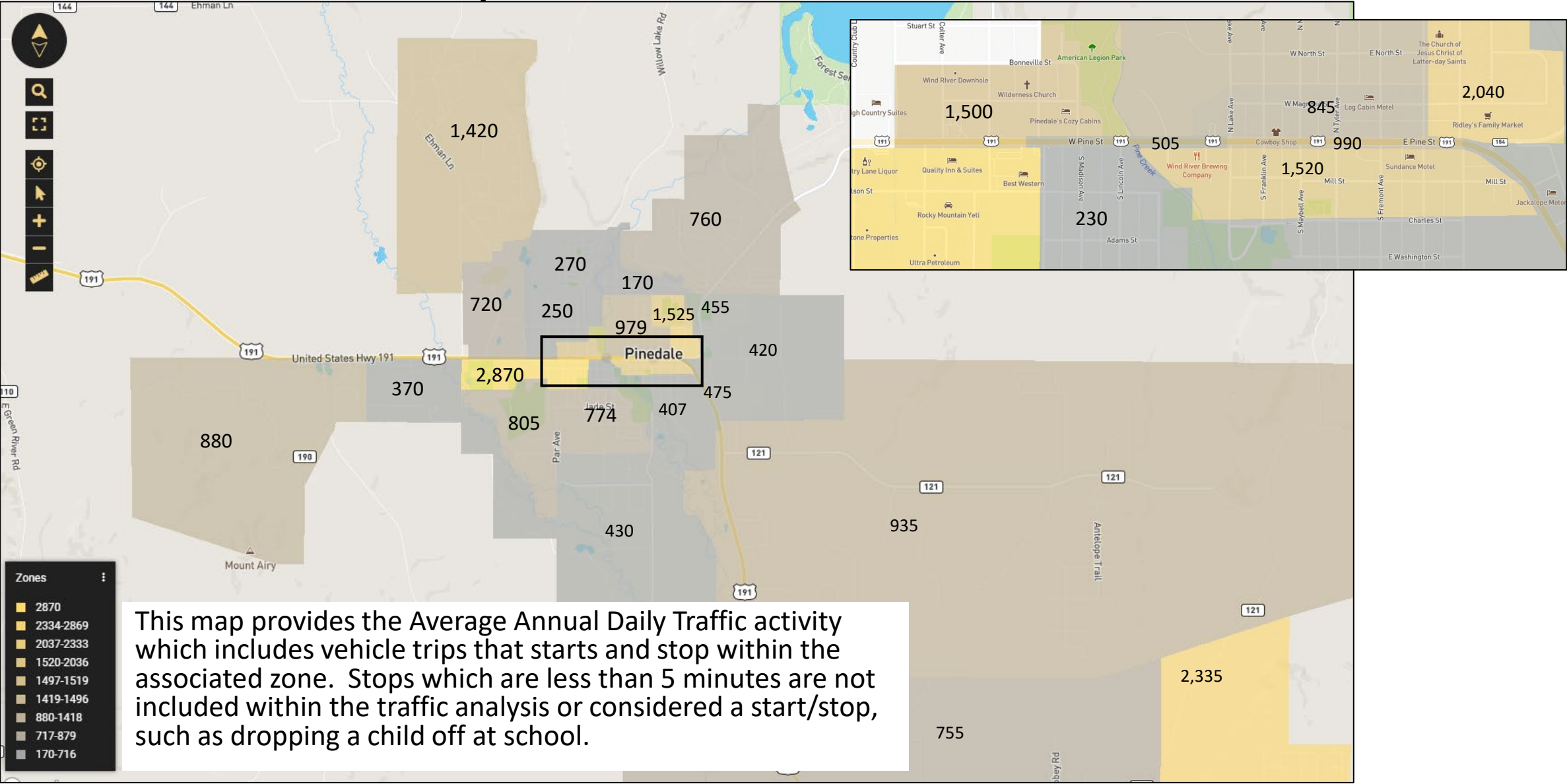


StreetLight Analysis

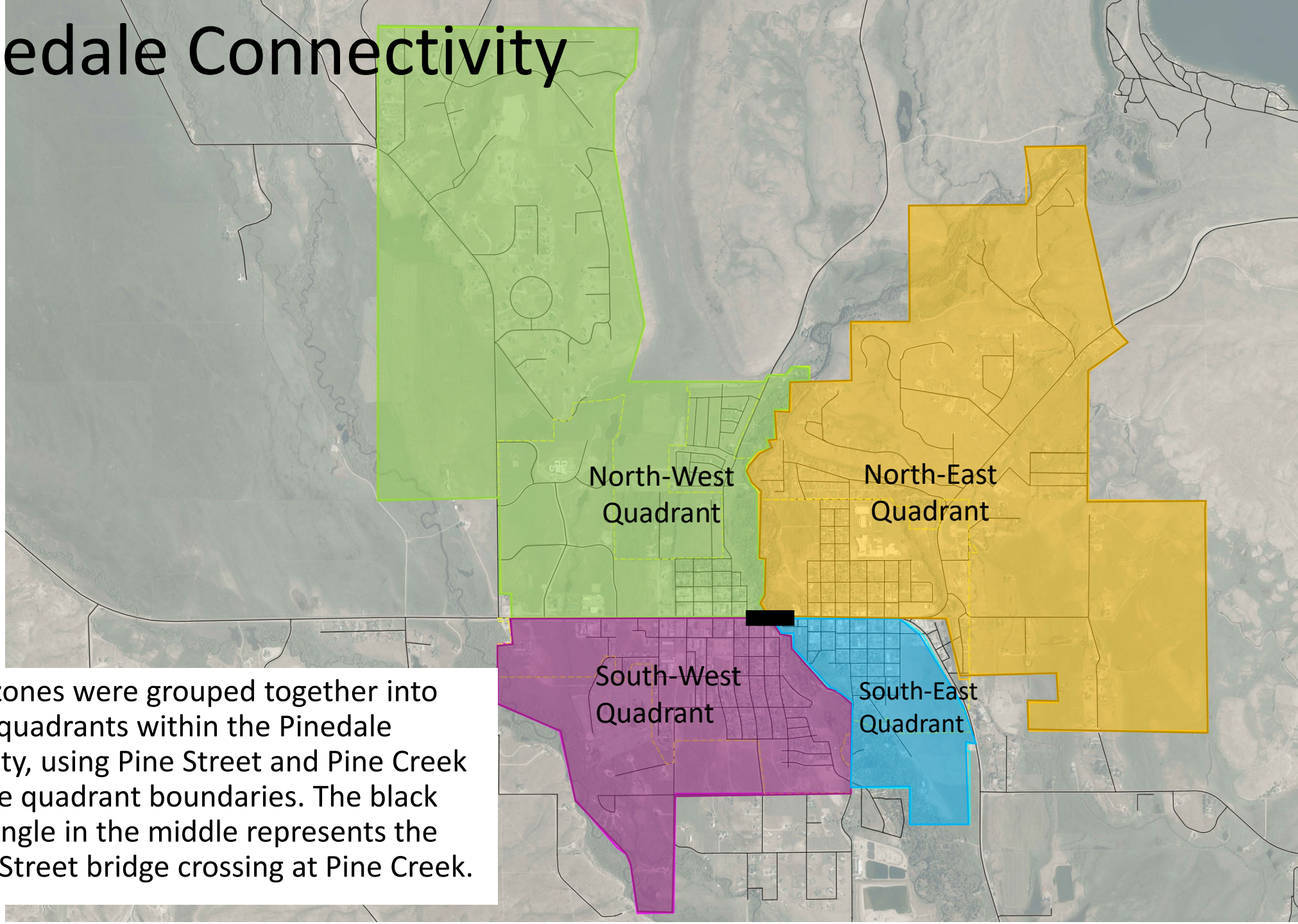
Transportation Analysis Zones (TAZs) were developed based on zoning and roadway network. These TAZs are used to “group” transportation areas for analysis with the use of StreetLight Data.



2021 Zone Activity



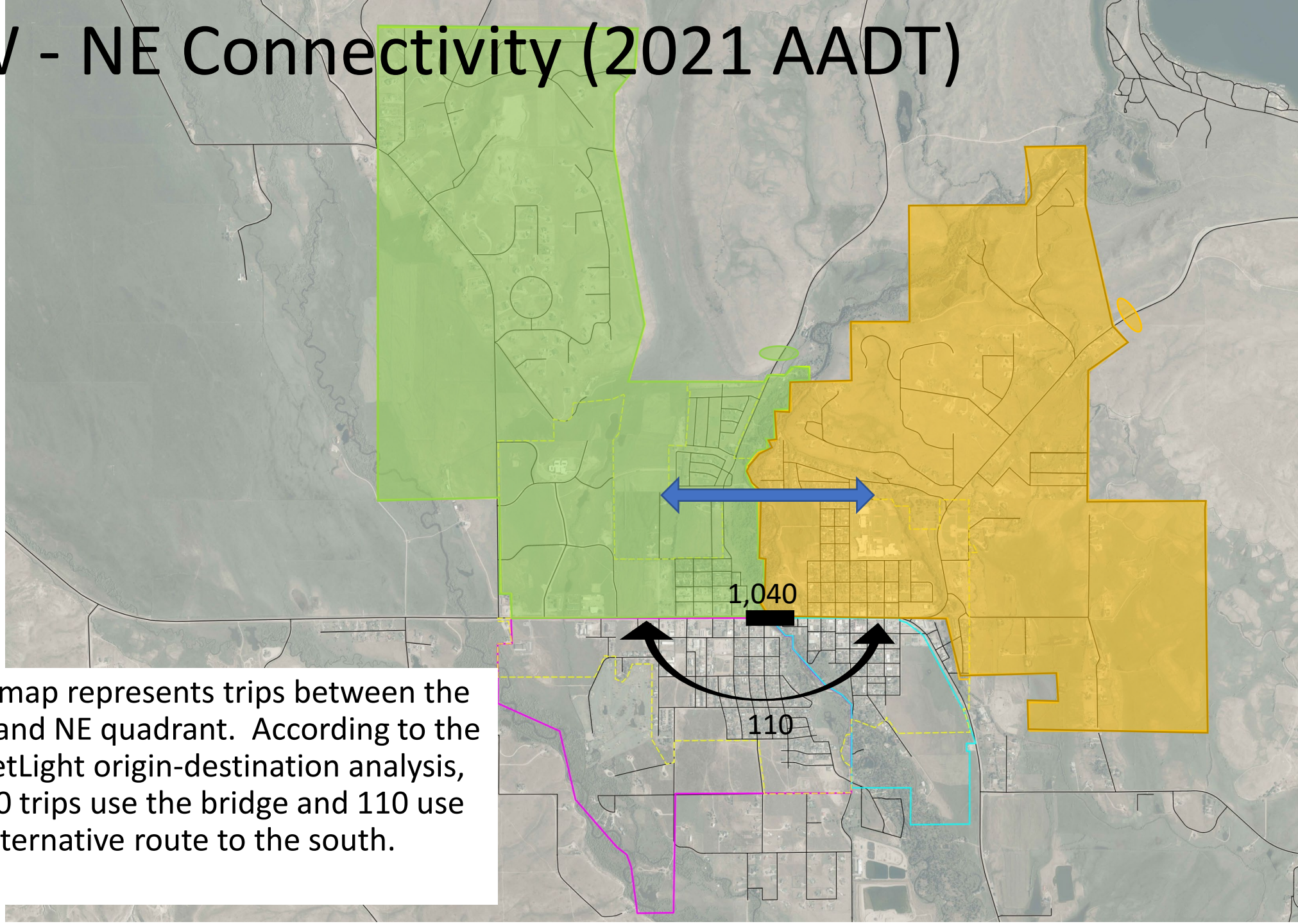
Pinedale Connectivity



The zones were grouped together into four quadrants within the Pinedale vicinity, using Pine Street and Pine Creek as the quadrant boundaries. The black rectangle in the middle represents the Pine Street bridge crossing at Pine Creek.

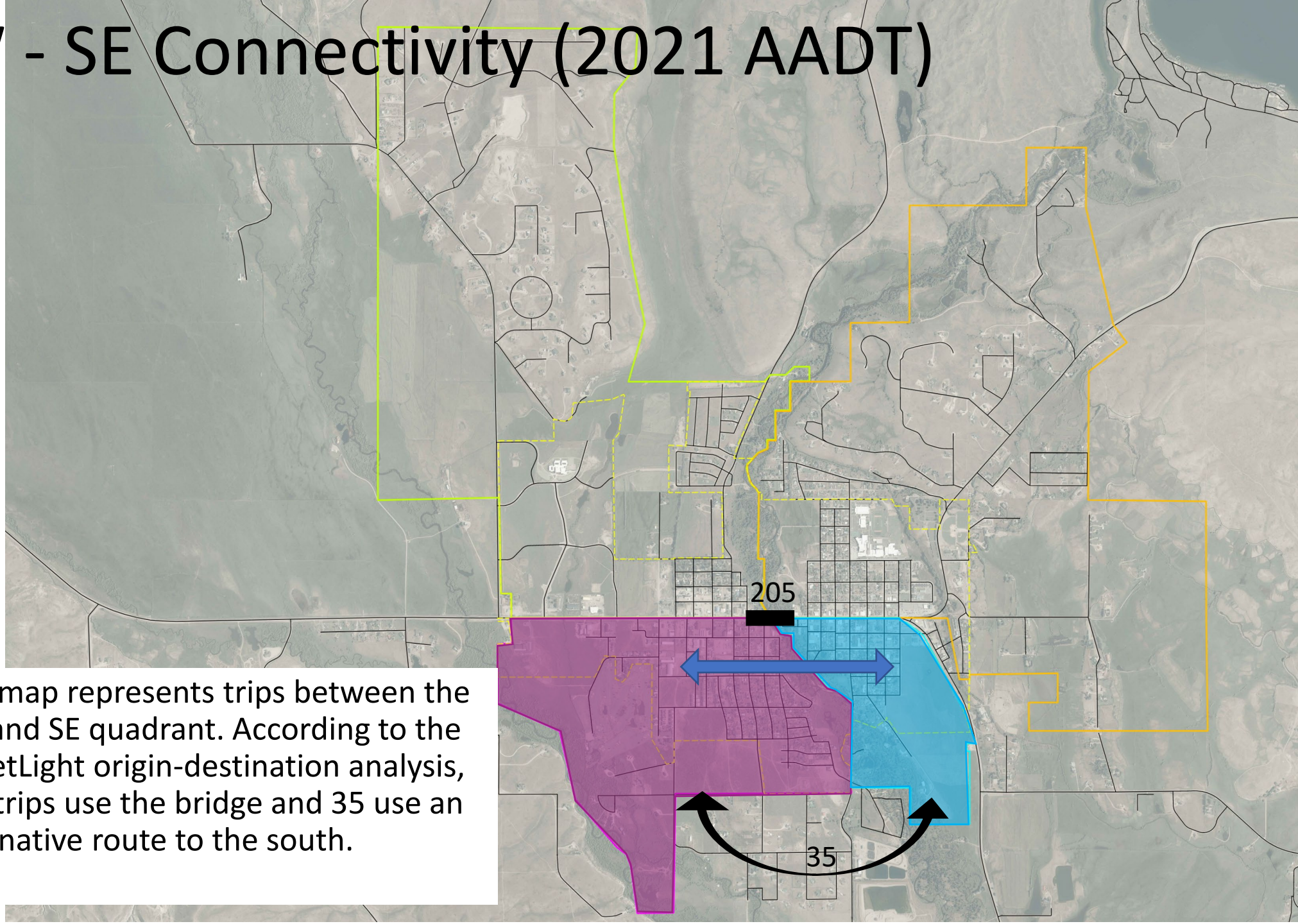
NW - NE Connectivity (2021 AADT)

This map represents trips between the NW and NE quadrant. According to the StreetLight origin-destination analysis, 1,040 trips use the bridge and 110 use an alternative route to the south.

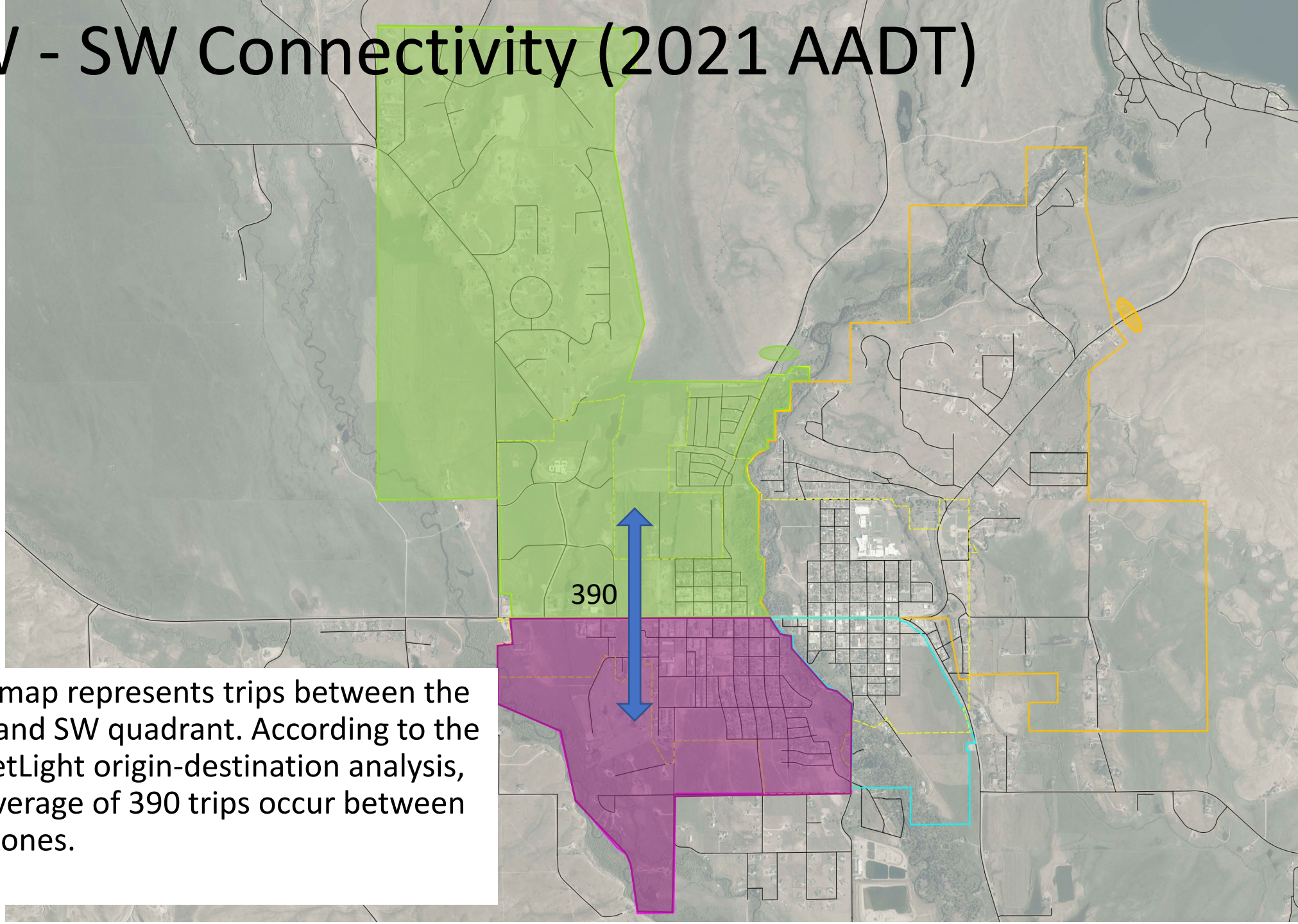


SW - SE Connectivity (2021 AADT)

This map represents trips between the EW and SE quadrant. According to the StreetLight origin-destination analysis, 205 trips use the bridge and 35 use an alternative route to the south.



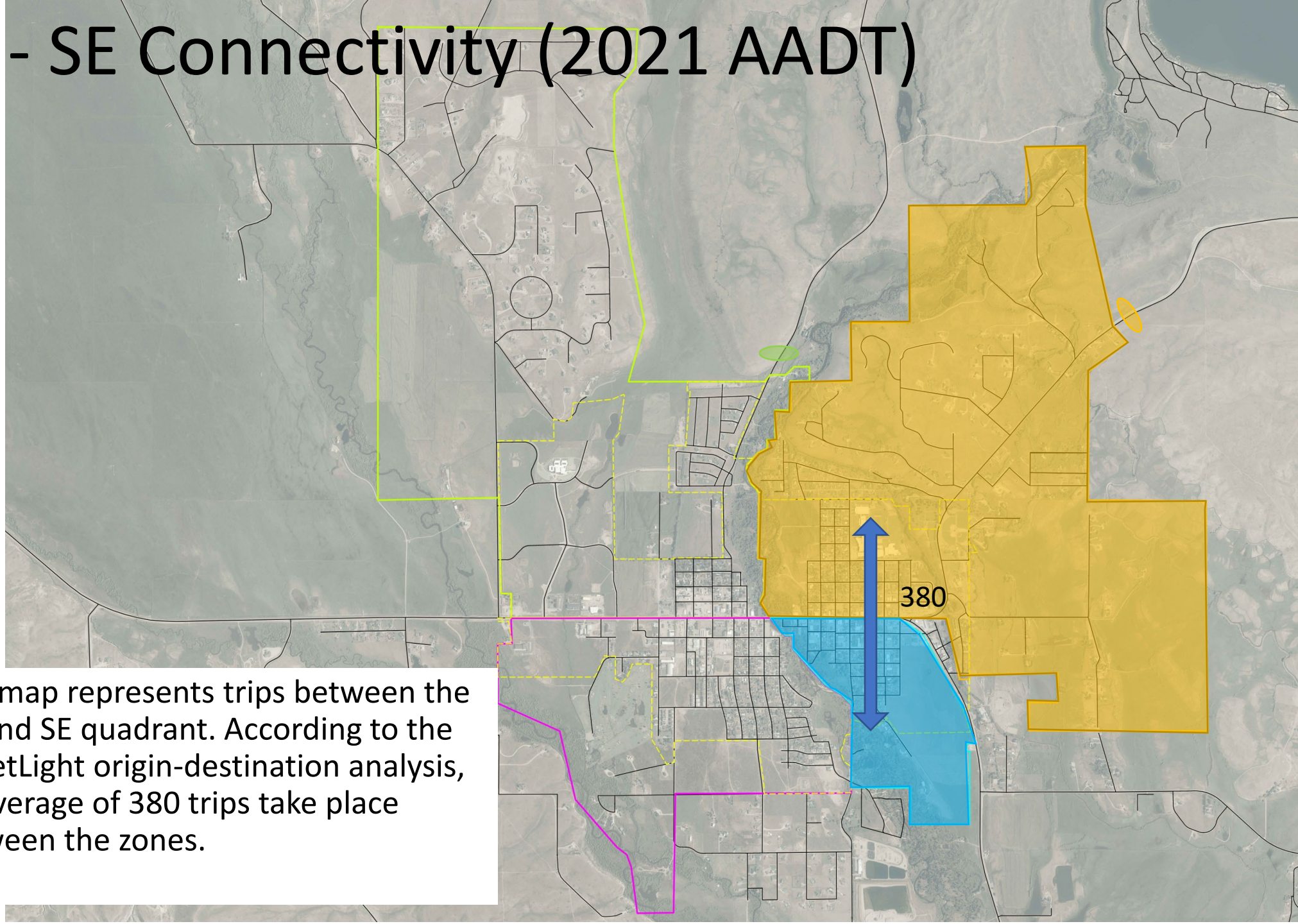
NW - SW Connectivity (2021 AADT)



This map represents trips between the NW and SW quadrant. According to the StreetLight origin-destination analysis, an average of 390 trips occur between the zones.

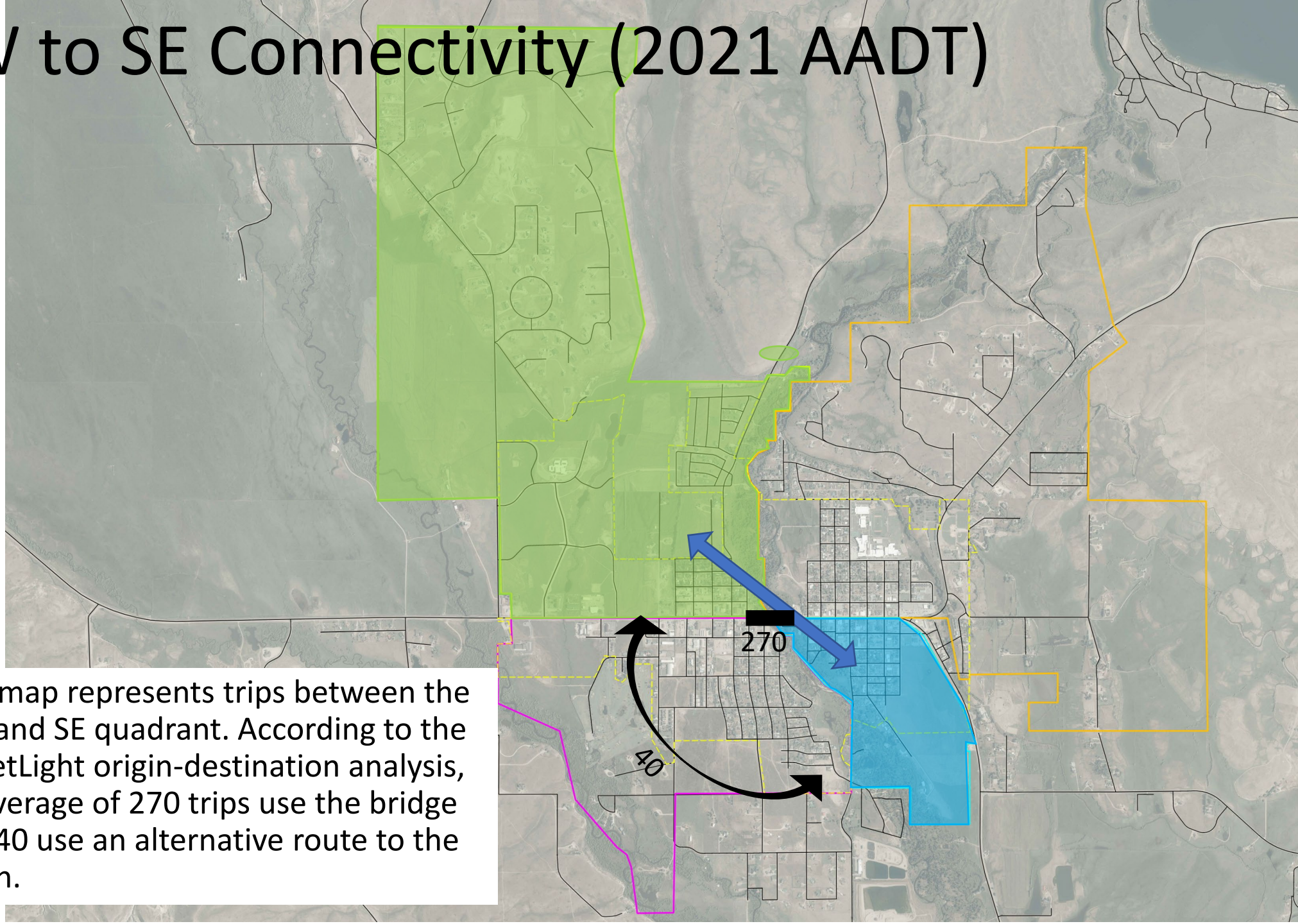
NE - SE Connectivity (2021 AADT)

This map represents trips between the NE and SE quadrant. According to the StreetLight origin-destination analysis, an average of 380 trips take place between the zones.



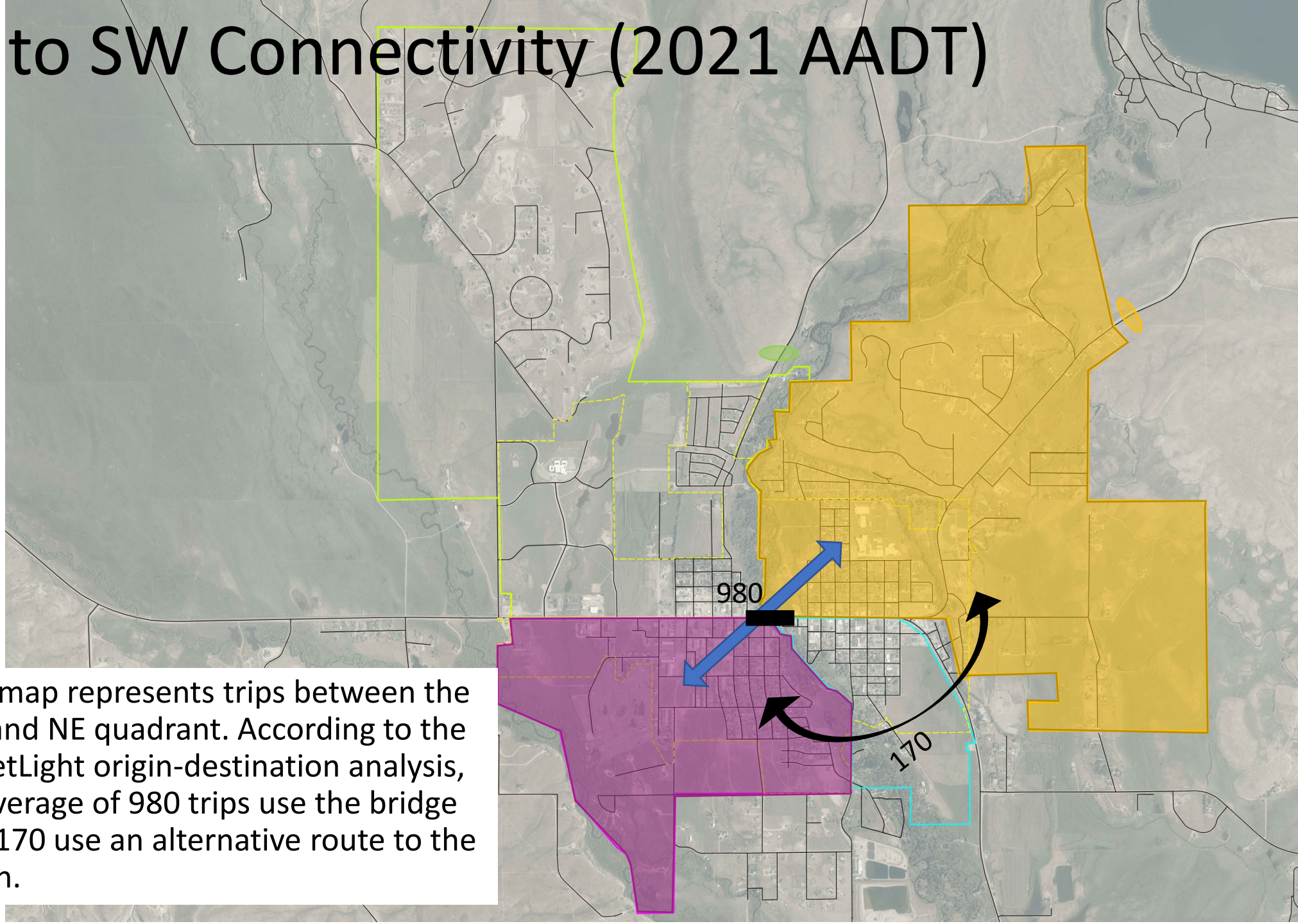
NW to SE Connectivity (2021 AADT)

This map represents trips between the NW and SE quadrant. According to the StreetLight origin-destination analysis, an average of 270 trips use the bridge and 40 use an alternative route to the south.

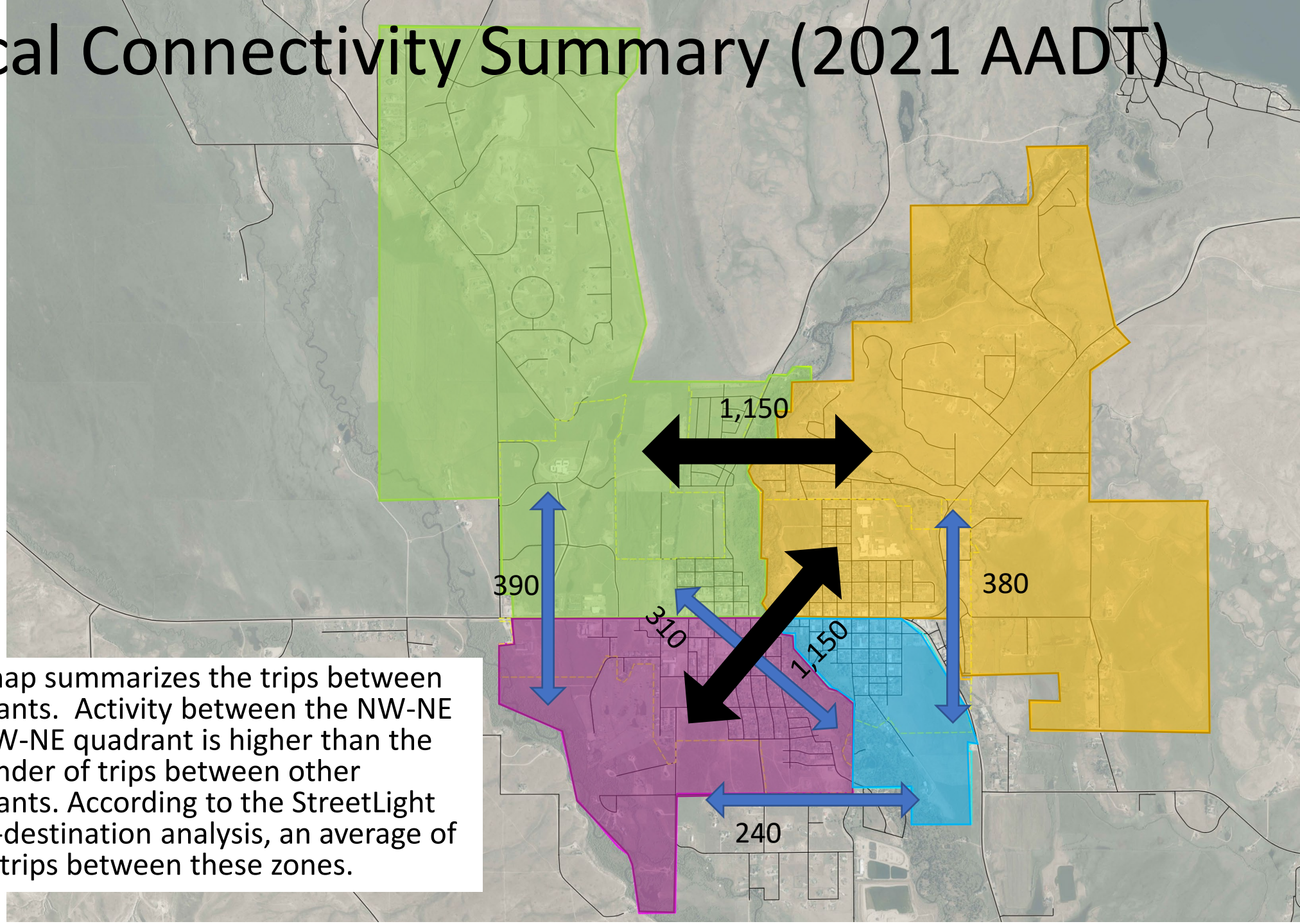


NE to SW Connectivity (2021 AADT)

This map represents trips between the SW and NE quadrant. According to the StreetLight origin-destination analysis, an average of 980 trips use the bridge and 170 use an alternative route to the south.

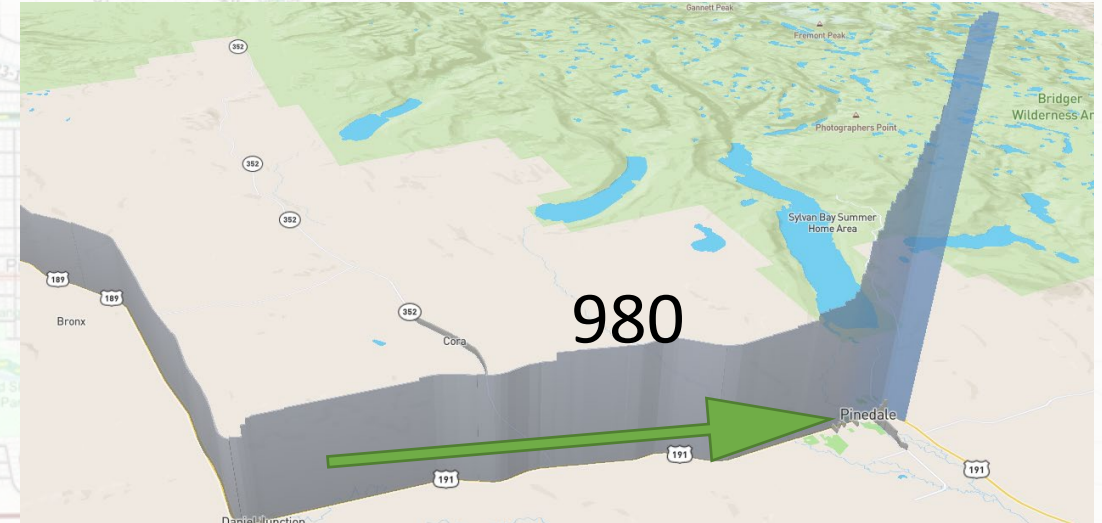


Local Connectivity Summary (2021 AADT)



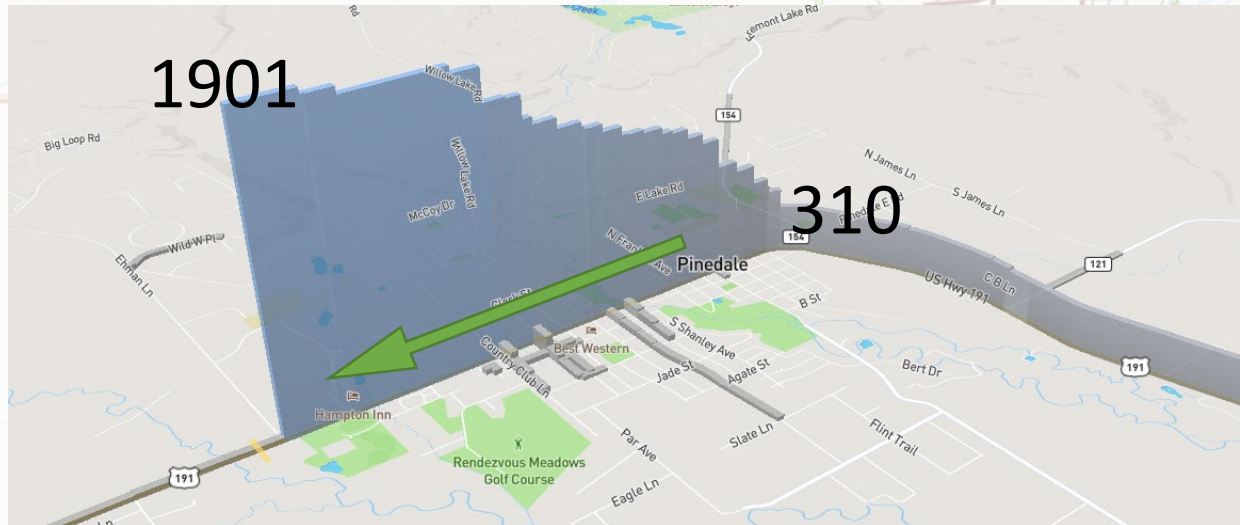
This map summarizes the trips between quadrants. Activity between the NW-NE and SW-NE quadrant is higher than the remainder of trips between other quadrants. According to the StreetLight origin-destination analysis, an average of 3,620 trips between these zones.

Pine Street Thru Traffic July (2021)



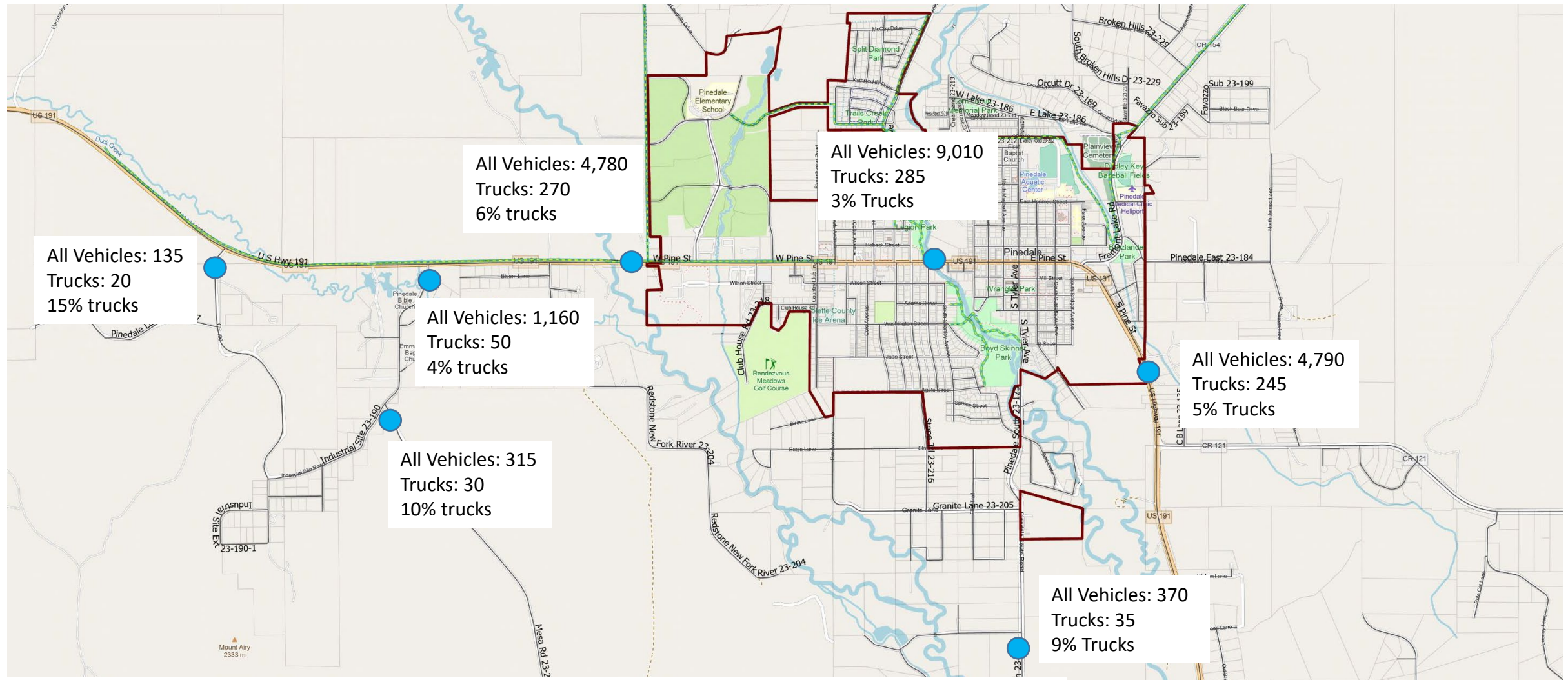
Based on July average daily traffic and the StreetLight analysis,
25% thru traffic (within middle of town)

Pine Street Thru Traffic March (2021)



Based on March average daily traffic and the StreetLight analysis, 10% thru traffic (within middle of town)

Truck Traffic – 2021 AADT

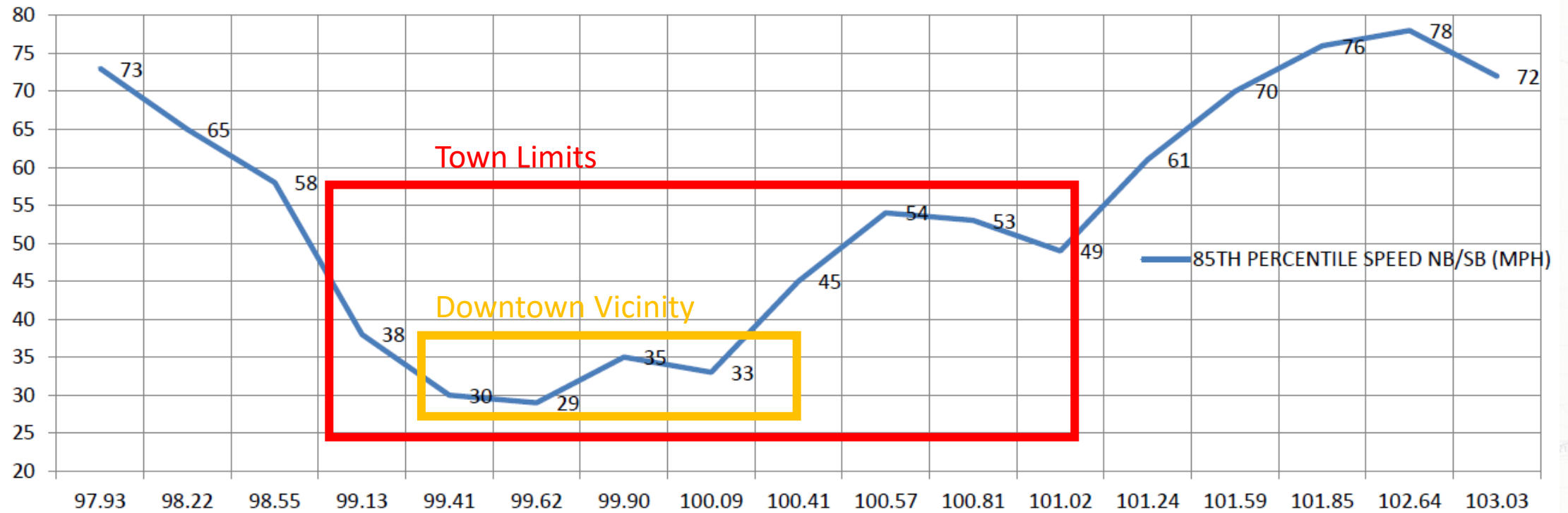


Approximately 75% trucks travel thru on Highway 191

(based on OD analysis, 2021)

Speed Study (2016)

85TH PERCENTILE SPEED NB/SB (MPH)



Pine Street Capacity (Tyler Intersection)

Two-way-stop-controlled Intersection Level of Service

Control Delay (s/veh)	Level of Service
≤ 10	A
$>10-15$	B
$>15-25$	C
$>25-35$	D
$>35-50$	E
>50	F

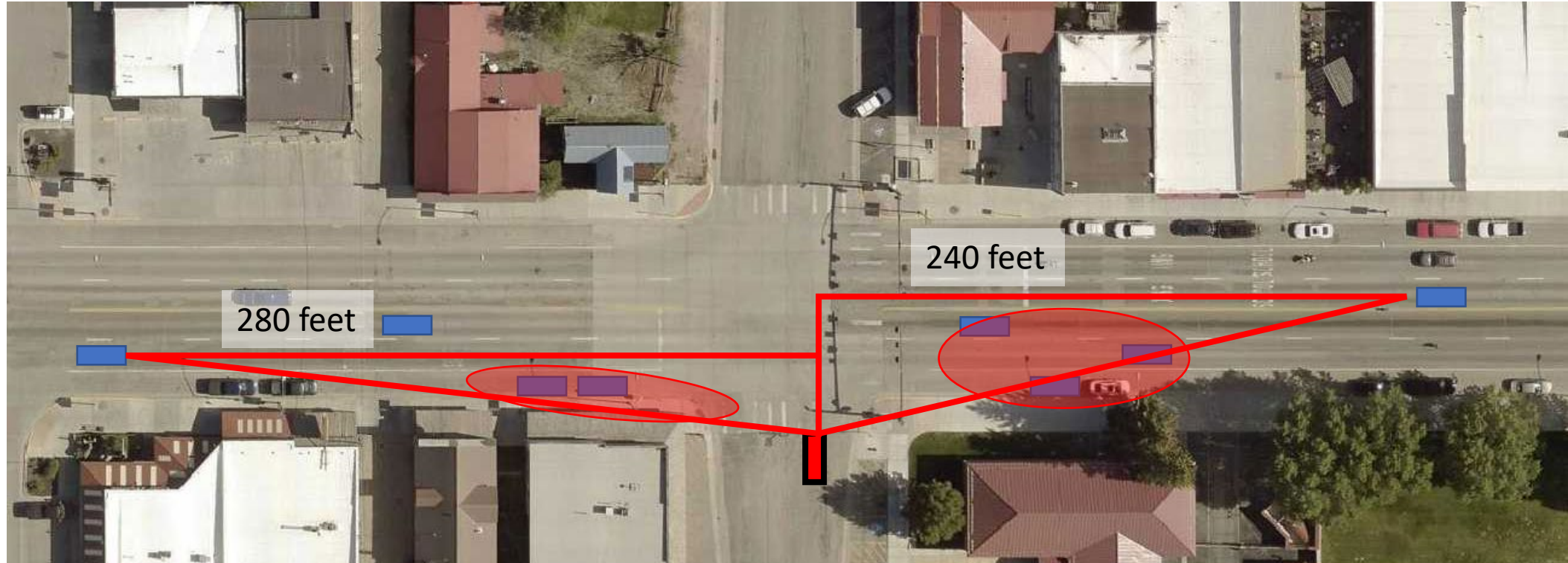
Level of Service is calculated during the peak hour of traffic movements at the intersection.

Pine Street Capacity (Tyler Intersection)

Average % Increase	Traffic Volume (vehicles per day)	Level of Service for Minor Approach Movements
Current	7,000 - 11,000	LOS C – LOS D
33% increase	11,000 - 13,000	LOS E
66% increase	14,000 - 16,000	LOS F

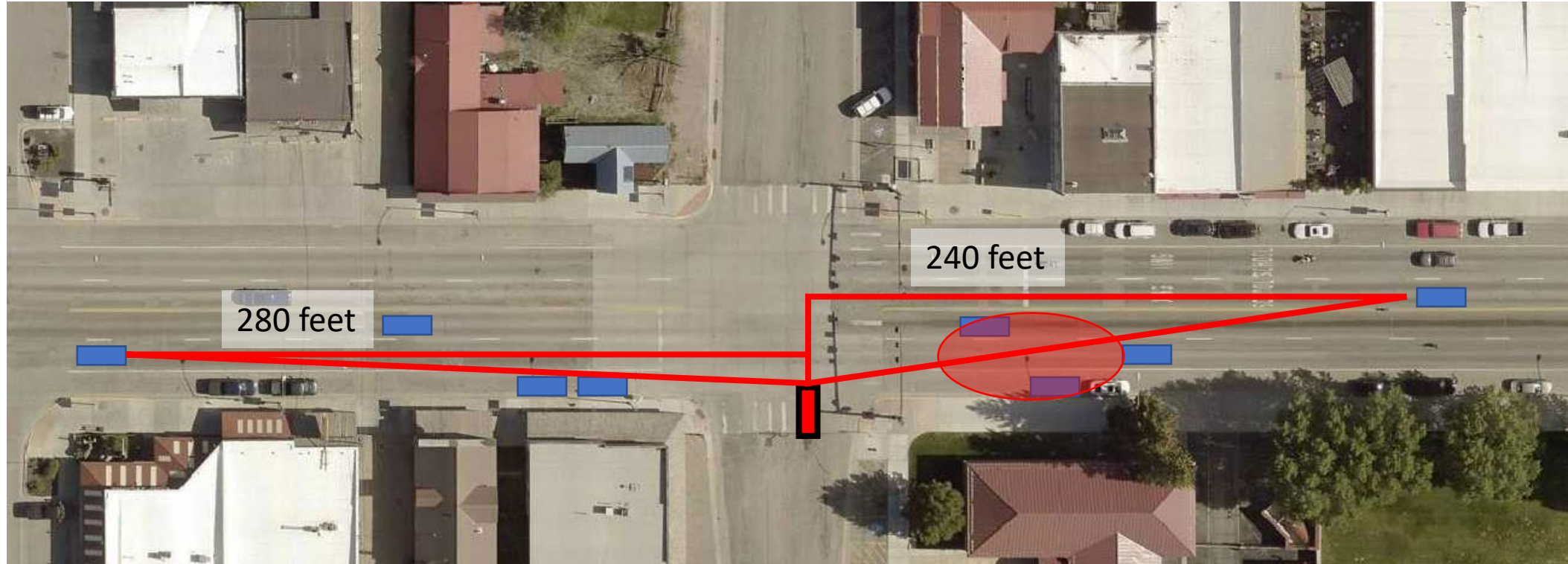
The capacity of the HWY 191 is much more than 16,000 vpd; however as the volume on HWY 191 increases, the level of service for left turns onto the roadway or thru movements across the roadway decreases. With a capacity of 16,000 vpd the level of service for the approaches will operated at an F during the peak hours.

Sight Distance Triangle – Tyler Intersection Example



Sight distance is an issue at many intersections around town at the intersection approaches. This is an example at the intersection of Pine Street and Tyler Avenue. There are obstructions when sitting behind the crosswalk at this intersection. The required site distances, provided above, are based on the AASHTO Policy on Geometric Design of Highways and Streets.

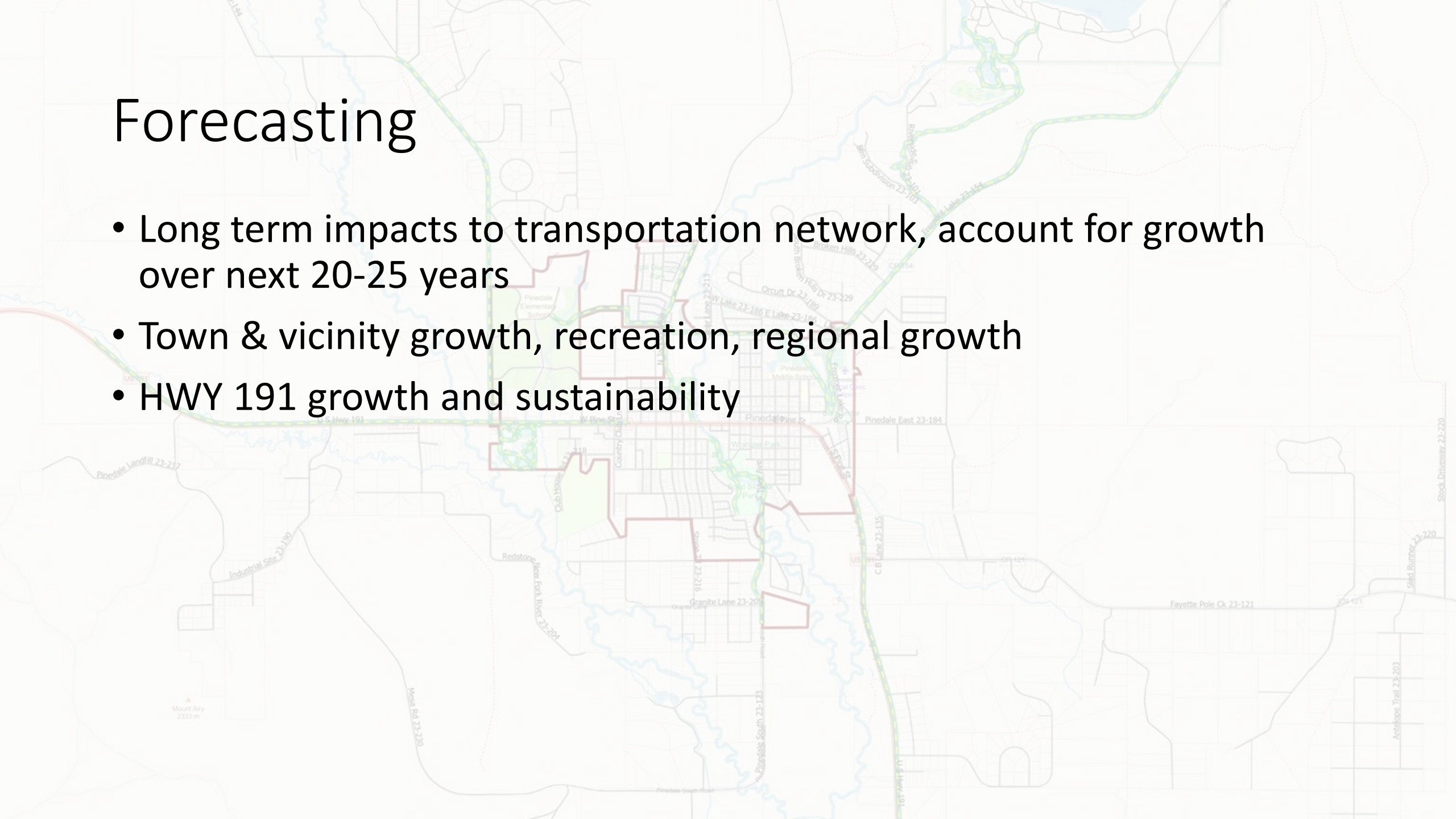
Sight Distance Triangle – Tyler Intersection Example



In order to improve the sight distance, the vehicle must advance forward to adequately see vehicles on Pine Street. For this example, the vehicle is now on the crosswalk, making this unsafe for pedestrians.

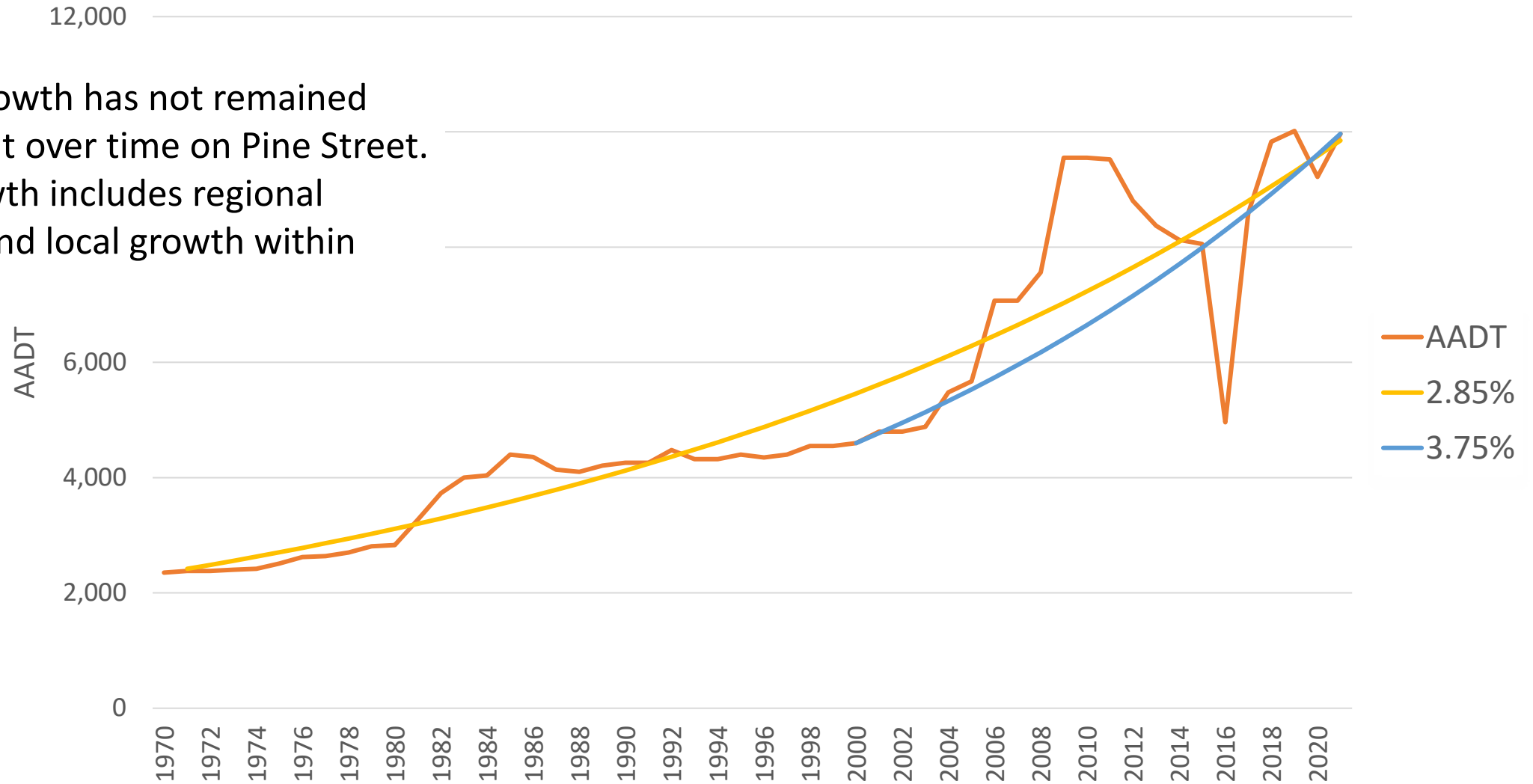
Forecasting

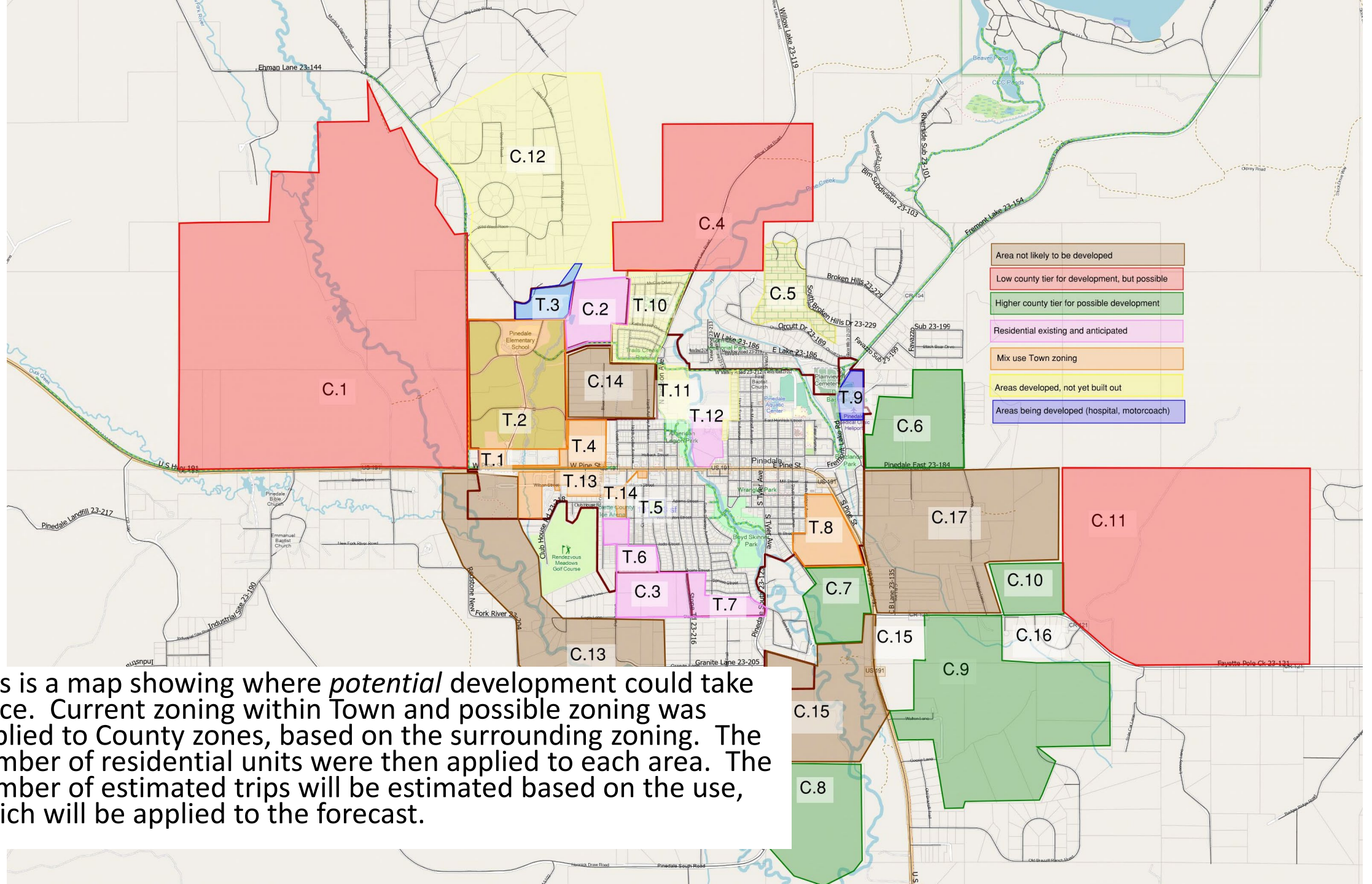
- Long term impacts to transportation network, account for growth over next 20-25 years
- Town & vicinity growth, recreation, regional growth
- HWY 191 growth and sustainability



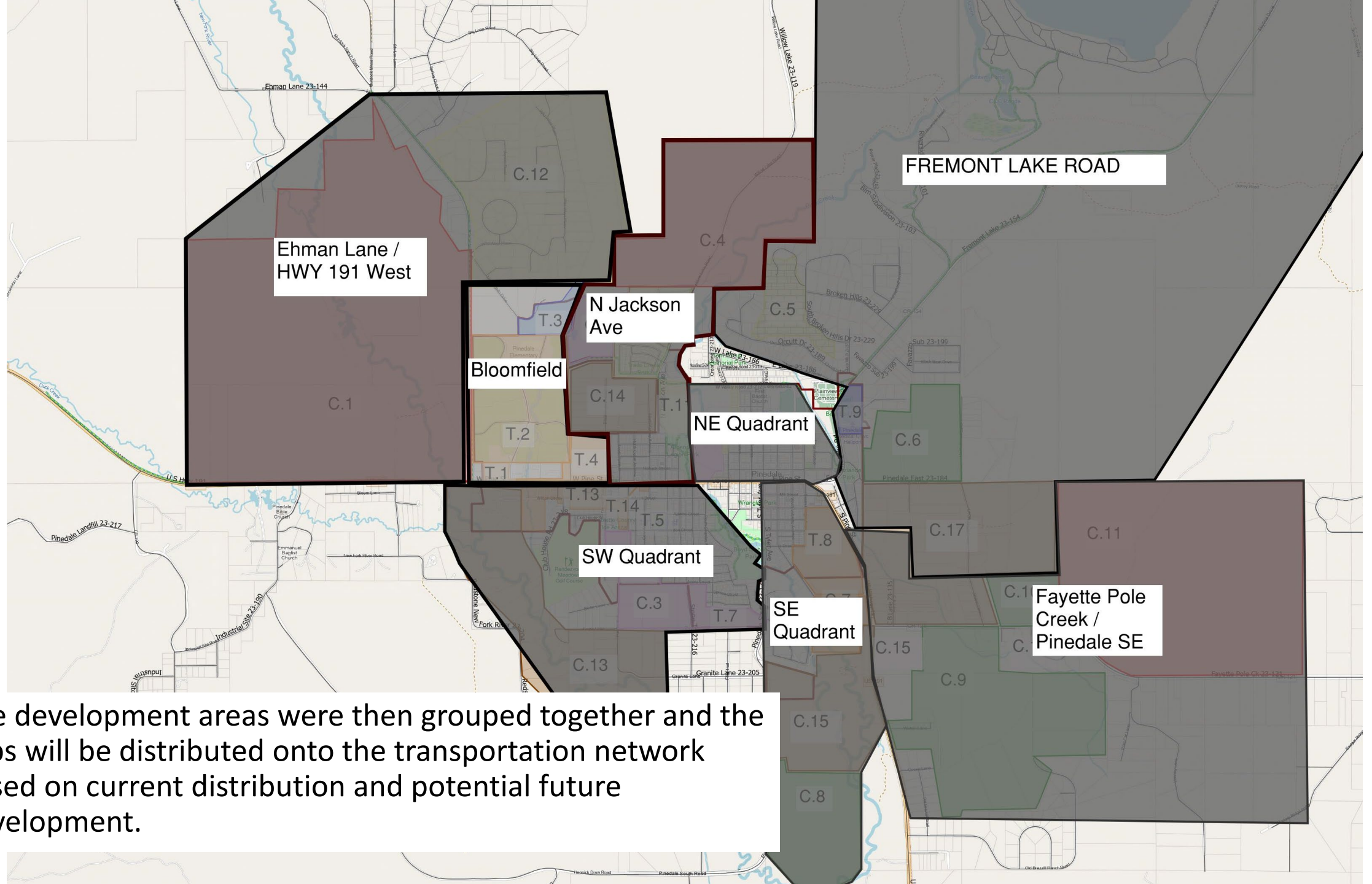
Pine Street Growth (Fremont Lake Road Pinedale Segment)

Traffic growth has not remained consistent over time on Pine Street. This growth includes regional growth and local growth within Town.





This is a map showing where *potential* development could take place. Current zoning within Town and possible zoning was applied to County zones, based on the surrounding zoning. The number of residential units were then applied to each area. The number of estimated trips will be estimated based on the use, which will be applied to the forecast.



The development areas were then grouped together and the trips will be distributed onto the transportation network based on current distribution and potential future development.

Forecasting

Based on historic trends and team discussions a 2% growth on HWY 191 and collector roads including Ehman Lane, Willow Lake, and Fremont Lake Road will be applied to capture increased trips from the region and for possible growth in recreation. A 1% growth factor across the rest of the transportation network will be applied. We will then apply vehicle trips for development growth within the vicinity to account for the remainder of development and vicinity population growth. Commercial development will be taken into account with some re-distribution factors, but we do not want to double count trips which are already accounted. For example, if a new grocery store were ever constructed on the west end of town this would redistribute some existing trips from the current grocery stores to the new.

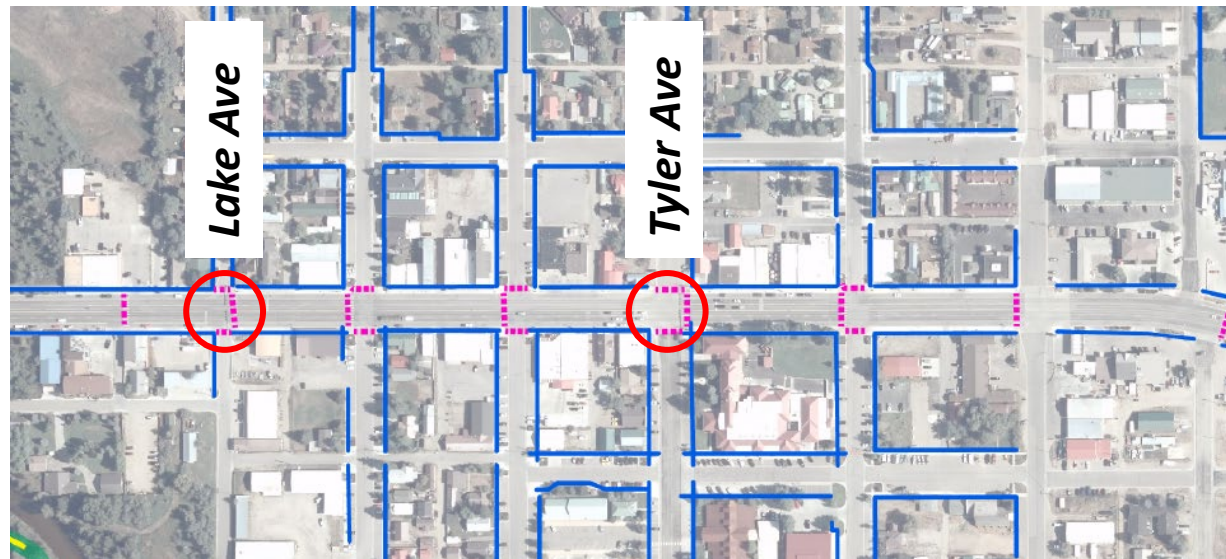
Bicycle & Pedestrian Activity

- Daily pathway users (October 2022)
 - Harmony Bridge: 150-200
 - Tranquility Bridge: 50-80
 - South Tyler: 30-50
 - Naomi Pape Trail: 30-50
 - Barber Creek: 10-20
 - E 191: 5-10
 - Ballfields: 0-10

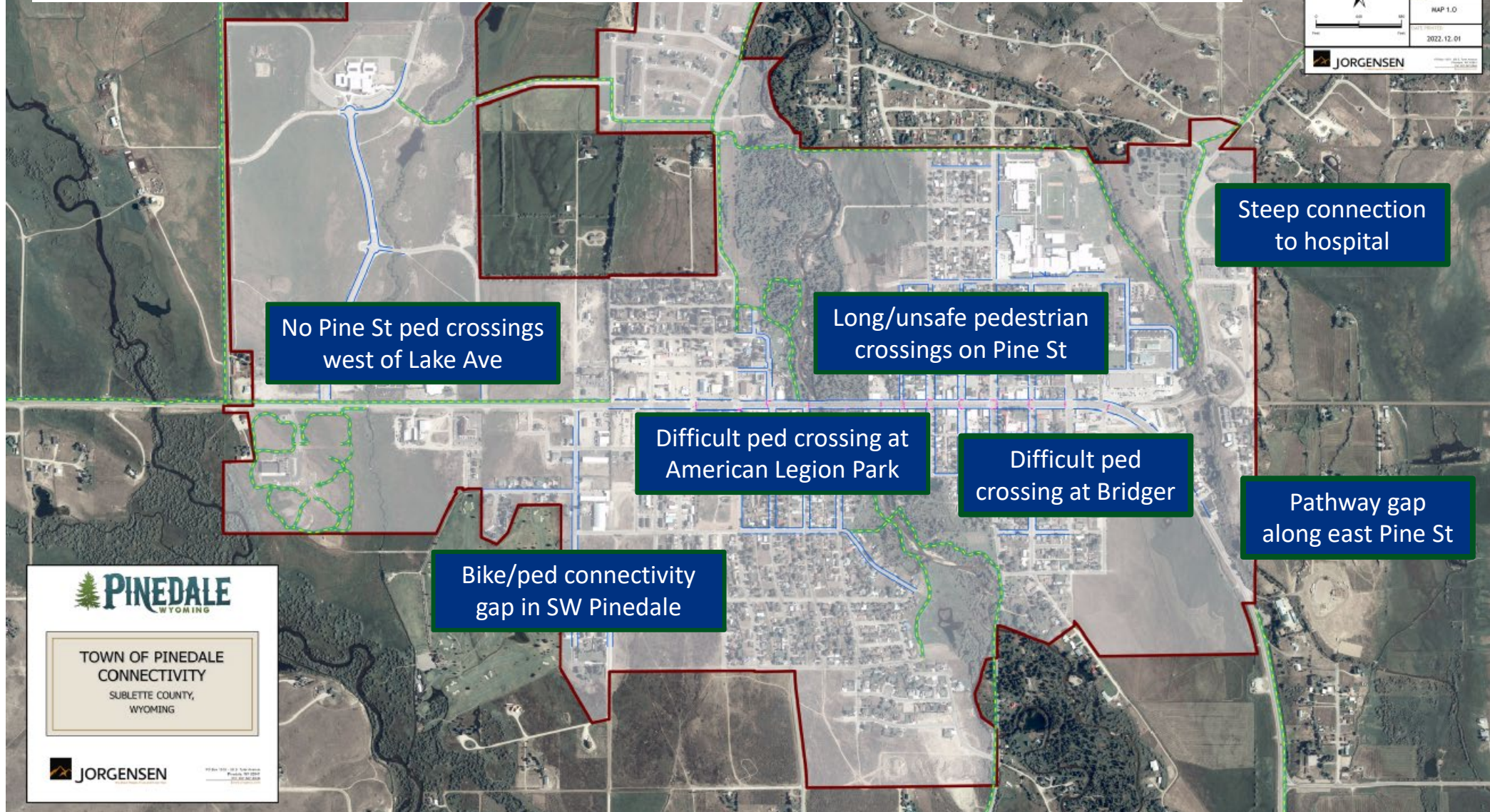


Bicycle & Pedestrian Activity

- HAWK crossing activations
 - Analyzed data from one week in February and one week in July
 - Tyler & Pine: 716 uses in July, 243 in February
 - Lake & Pine: 373 uses in July, 65 in February
 - Majority of activations between 11am and 5pm



Multimodal Issues & Opportunities



- Winter analysis (March) and summer analysis (July)
- Intersection analysis – current and forecast conditions
- Safety analysis (DyExSys)
- Right of Way review, identification and connectivity

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Next Steps, recommendations, solutions

- Additional Pine Street analysis and modeling
- Safety audit
- Alternatives development, matrix assessment
- Thresholds and timing for improvements
- Funding opportunities
- Community involvement

Project schedule Overview

Item	Schedule
Analyses and forecasting	Current – January
Safety audit	Current – January
Right-of-way review & identification	January – February
Alternatives review & evaluation	January – Early Feb
Steering Committee	February
Public Workshop	February
Preferred Alternatives	Late Feb
Town Adoption and Presentation	March



Questions