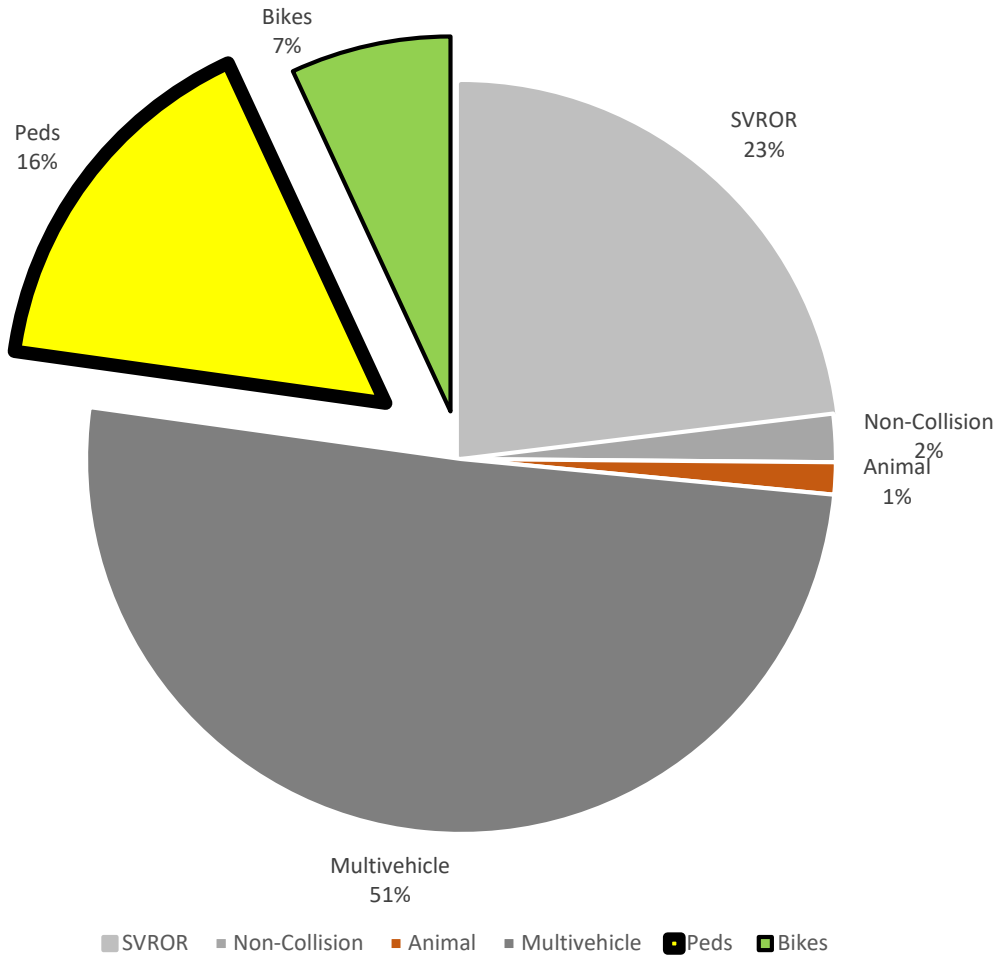
Pedestrian Crossings and Tudor Road

AMATS Transportation & Land Use Policy

DOT&PF and MOA

12/17/20

Anchorage Serious Injury and Fatal Crashes, 2013-2017



AMATS Agencies Programming

MOA – *"Vision Zero"*

- AMATS Non-motorized Plan
  - AMATS Priority Network
  - Denali, Fireweed, Spenard, Midtown Sidestreets, etc.
- AMATS Transportation Improvement Program
  - $2,000,000/year Non-motorized Plan Budget

DOT&PF – *"Towards Zero Deaths"*

State Active Transportation Plan

- 1R – Ramps, Repairs
- 3R – Rehabilitation
- 4R – New Facilities

- HSIP – Highway Safety Improvement Program
  - 8 Pedestrian Projects in Design now
  - $28,000,000 over next 5+ years

HSIP Ped Safety Review, concerns

DOTPF: Top crash areas

Tudor, Muldoon, Gambell, Downtown, Midtown

- HSIP/AMATS agree on Tudor's high rank.
- This is one site. There are others like it.
- HSIP/AMATS are not in agreement with other high crash corridors in the AMATS Plan.
- Any AMATS midblock crossing solutions on all high crash corridors won't meet engineering criteria as defined now.
- Midblock needs are bigger than funding, ranking in HSIP, TIP combined.
- Define a secondary network for midblock crossings to work well. Not done yet. Planning or Design function.

Request AMATS help planning Tudor Solutions

A. Refer to AMATS Technical Committee for Tudor review, other corridors in mind:
   1) Compare high ped crash corridor rankings in AMATS and HSIP programs.
   2) Recheck safety scores to improve ranking.
   3) Review or reset engineering criteria for crossing device solutions desired.
   4) Determine if bridges are an option for all high crash corridors.
   5) Map secondary network alternatives near arterials to better locate crossing goals. (Planning or Design: The network aims the "crossing" solutions. The crossings don't work if they don't fit the network.

B. Return to AMATS Policy Committee. Note any changes to criteria, projects targeting pedestrian safety corridors.

C. Synchronize pedestrian safety projects with the State/Federal HSIP Program for potential funds

Glenn Hwy & Bragaw St: 2005 vs 2020

AMATS Solution: Connect Anchorage

Tudor Road & Wright Street

Land Use (South Side):
Convenience Stores
Green Belts
Services
Housing

Land Use (North Side):
Rescue Mission
Services
Housing

HSIP Corridor Rank #2 Statewide

AMATS Ped Priority Rank #18

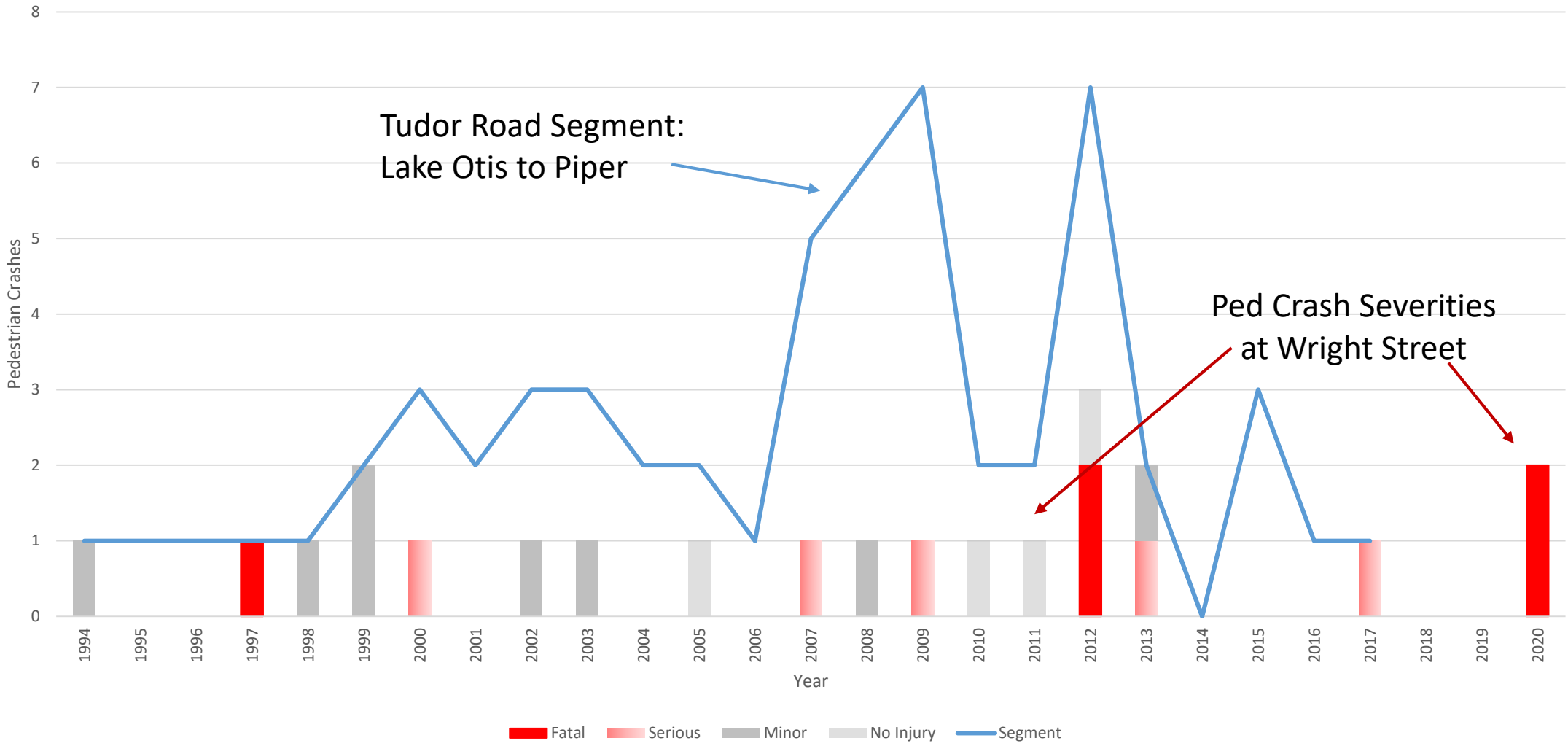
Wright Street: 10 ped xings per hour average

5 Pedestrian Fatalities as of 2020

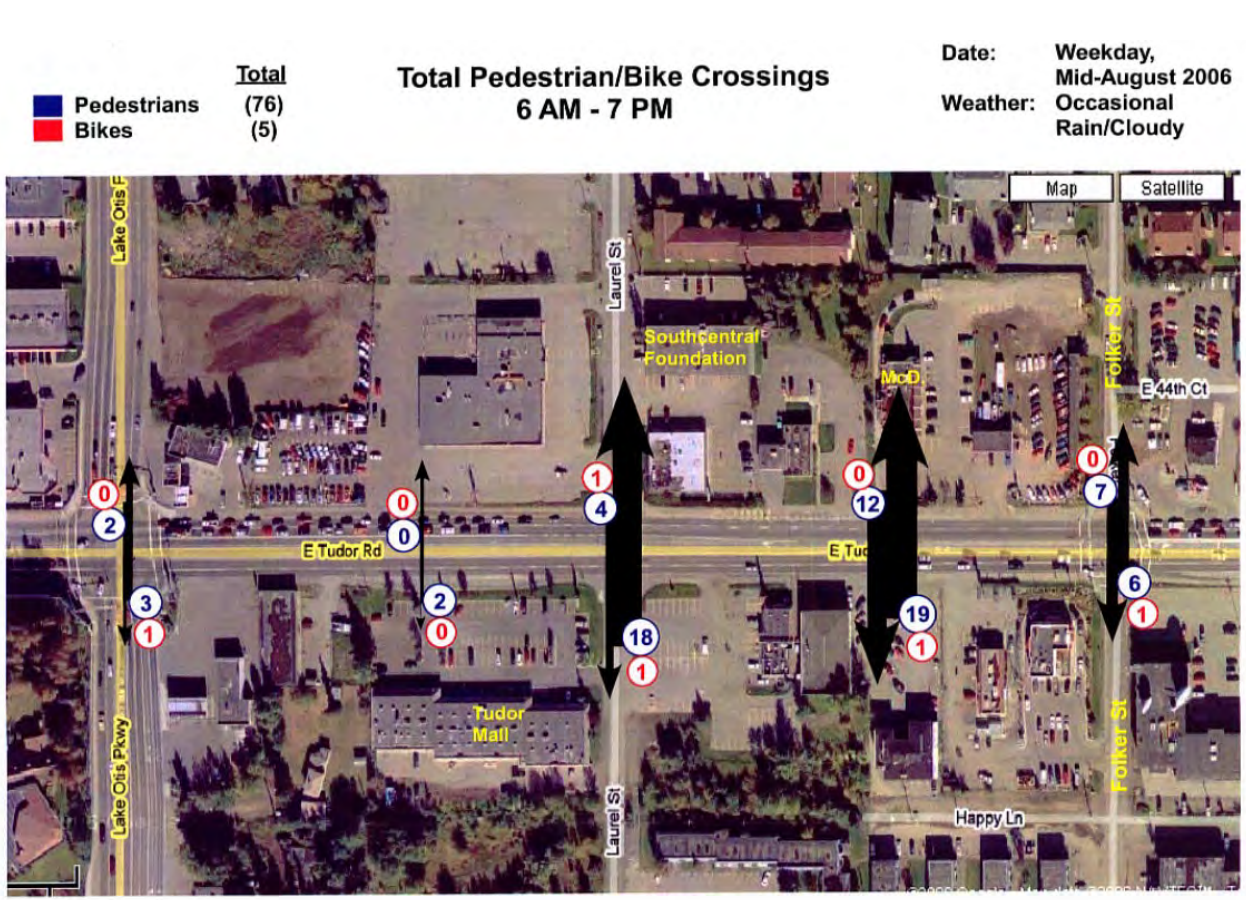
Tudor Road: 32,000 vehicles per day

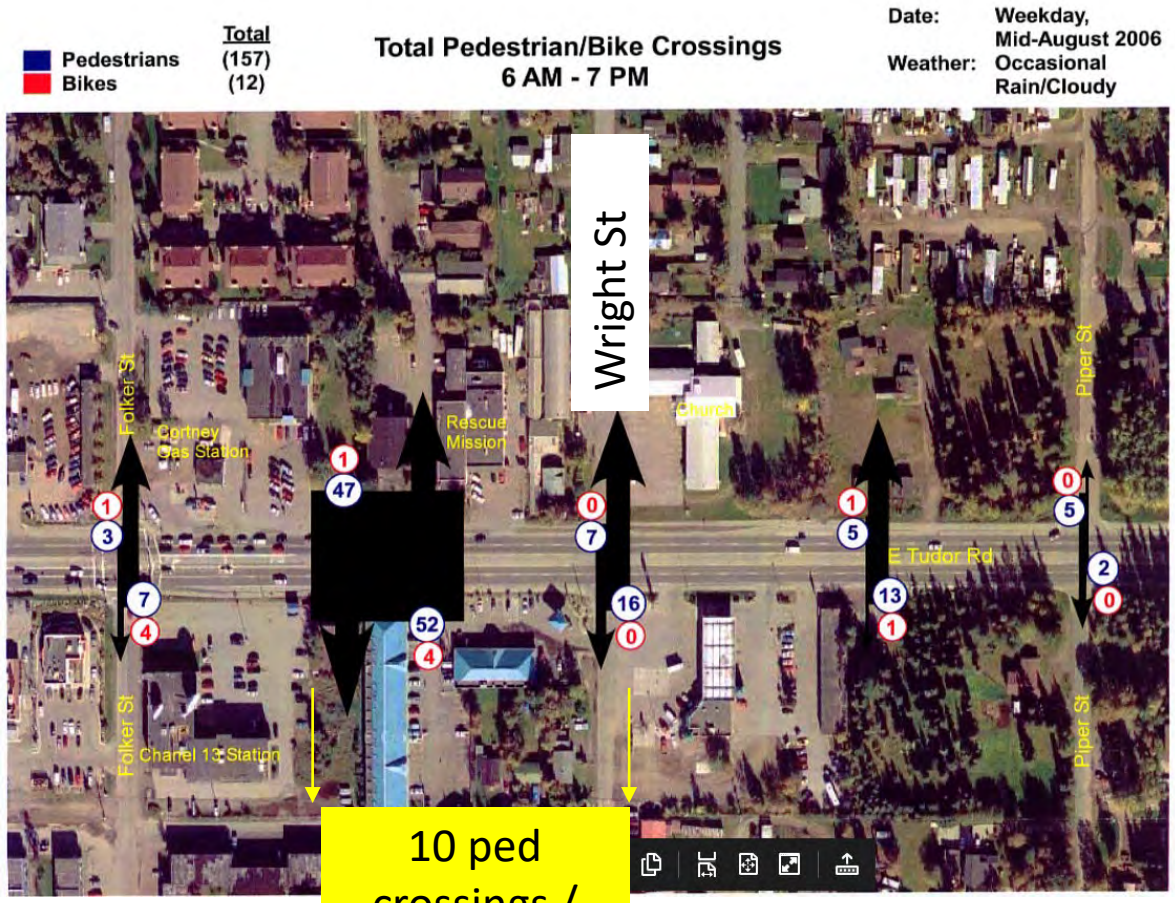
Speed Limit: 45 MPH

HSIP Data Review: Tudor Road and Wright Street



HSIP Pedestrian Crossing Counts (2006)





10 ped crossings / hour

AMATS Tudor & Wright Options

What's been done?

1. Remove Traffic (Connect Anchorage)
2. Median Refuge HSIP
3. Warning Signs HSIP
4. Lighting HSIP

What are some remaining options?

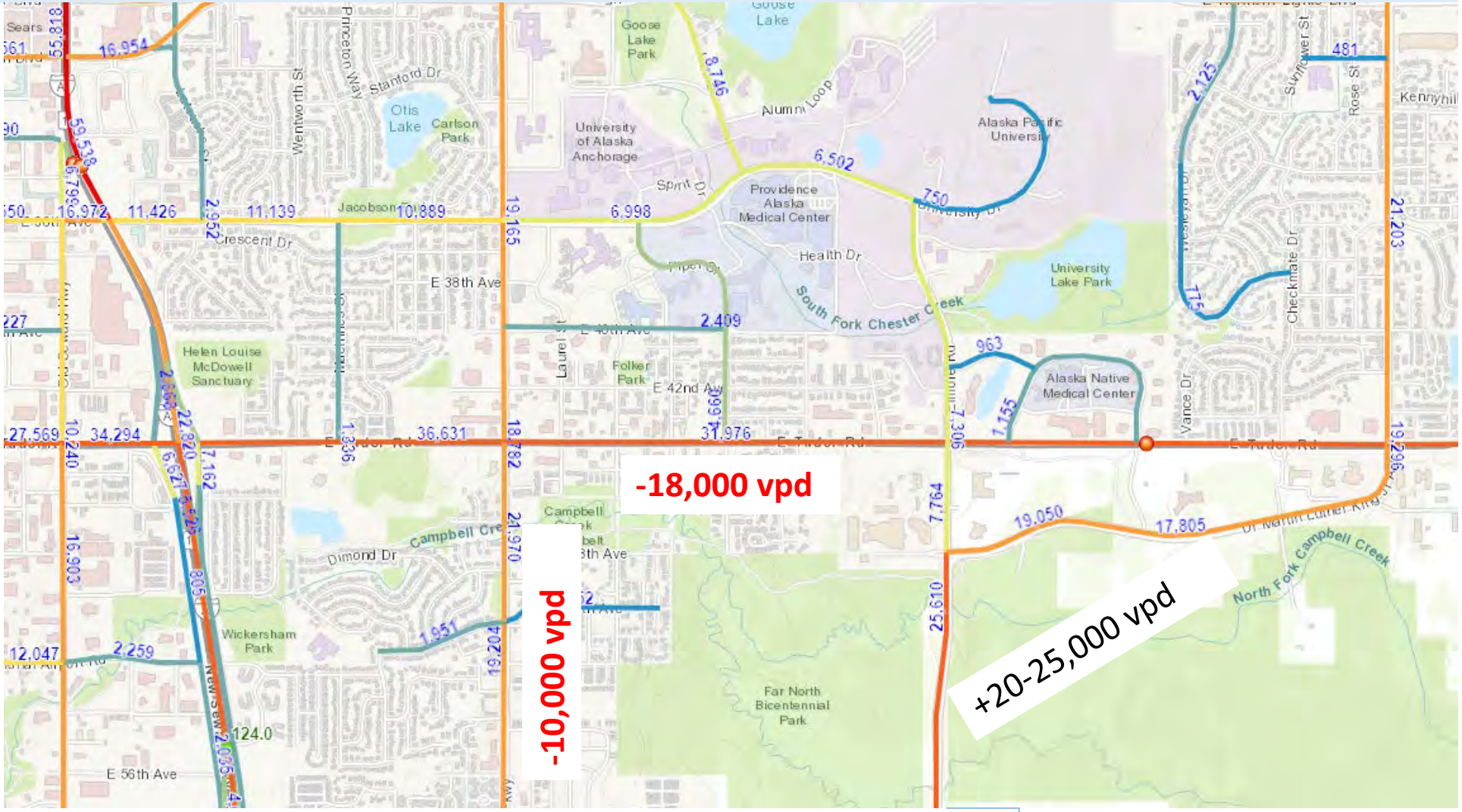
5. Counts, Expert Study
   Revise Design Criteria
   AMATS acceptance
6. Median infill, Xing Device
7. Pedestrian Bridge
8. Urban Safety Corridor
9. Arterial Traffic Calming
10. Land Use Changes

What's been done…
1. Remove Cars, Signal from Folker to Piper

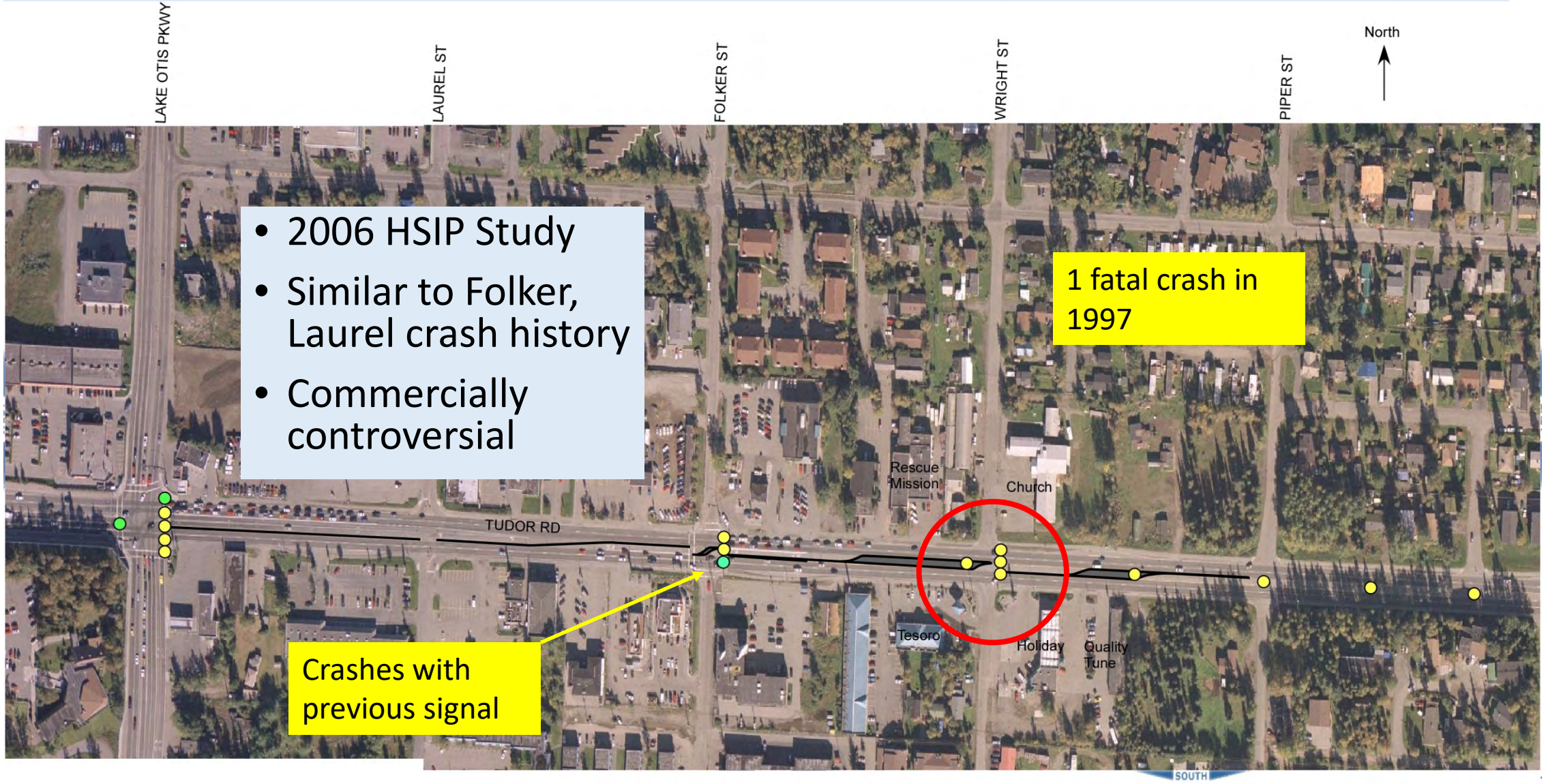
2008
Connect
Anchorage

Tudor Road
50,000 veh/day
(2003)
Now 32,000 veh/day

Reestablished
platoons and gaps



2. Median Refuge Concept



- 2006 HSIP Study
- Similar to Folker, Laurel crash history
- Commercially controversial

1 fatal crash in 1997

Crashes with previous signal

1992-2003 Pedestrian / Bicycle Collisions
Crashes Crossing Tudor Road Only,
Post Folker Signal Construction

2. Median Refuge (2010)

HSIP Cost: <$5 million

Benefit: Ped and Vehicle Crashes

3. Warning Signs (2016)

HSIP Cost: $20,000

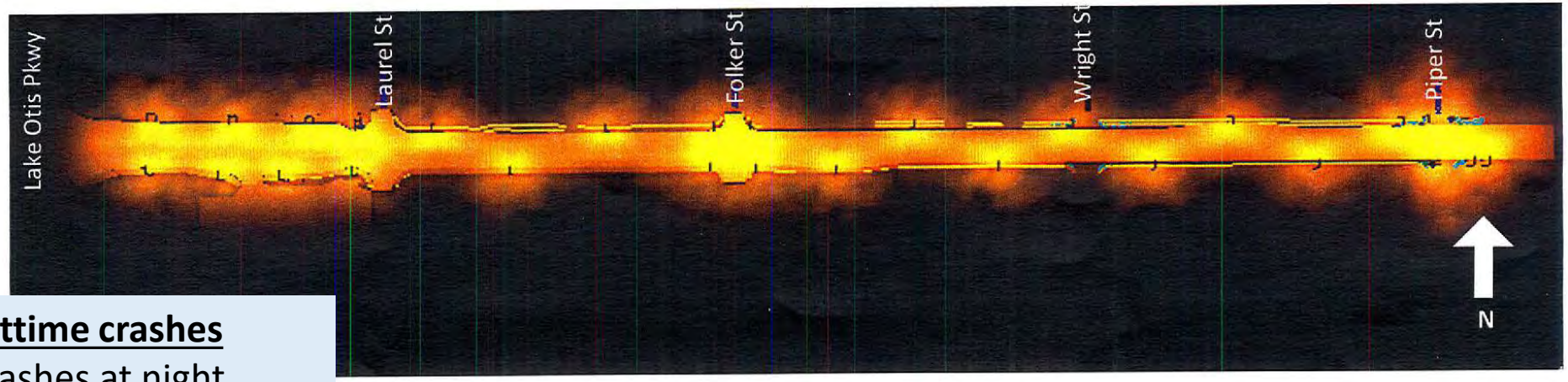
Benefit: Increased Awareness

4. Increased Lighting

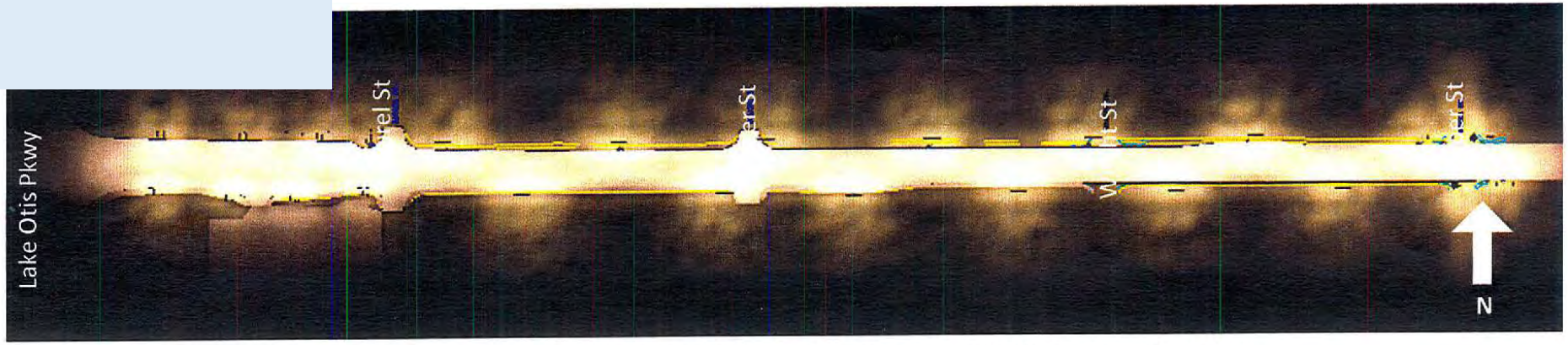
HSIP Began 2014
In Design
Construction
2021-22
2X Light Levels
5 top corridors

Criteria: **High nighttime crashes**
Effect: -25% ped crashes at night
Cost: **~ $5 million capital per mile**
M&O = no increase

Tudor Road: Lake Otis Pkwy. – Piper St. Pre-Design Example



Tudor Road with 400W Flat Glass HPS (BEFORE)



Tudor Road with Longhorn Poles East of Laurel, and LED Retrofit West of Laurel (AFTER)

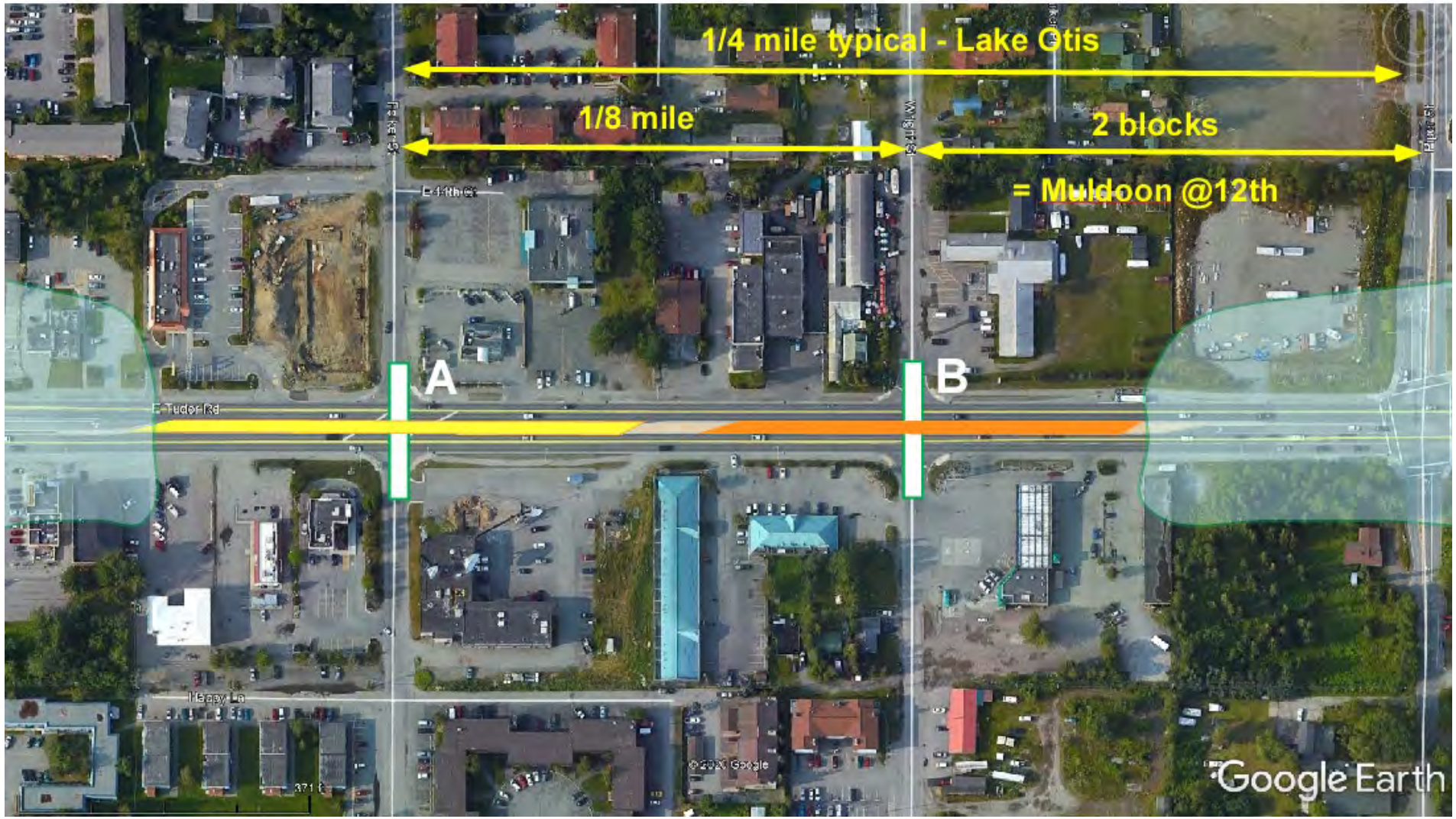
What's Next?
5. Counts. Design Study.

AMATS, MOA, DOTPF, Consultant

Update Segment Study

- Recount Ped Xings / Hr
- Retest criteria
- Waive or change criteria w/AMATS approval
- Fit solutions to network
- Model impacts as Devices or Bridges
- Set precedence for similar sites

6. Median, Crossing at Folker or Wright, with Device.



Pros

-Increased ped refuge
-Increased crossing with stopped traffic
-Has been done in other cities
-Lowers speeds
- Less safe w/o Device

Cons

-Design criteria not met
- Inconsistent with other sites in City
-Signal Progression impacts
-Increased stopped traffic

6. Crossing Device Types

- Driver understanding, respect?
- <u>Effect: Not favorable at 45 MPH</u>

Figure 1. A PHB in Phoenix Arizona provides protection for pedestrians near a high school. Photo Credit: Mike Cynecki

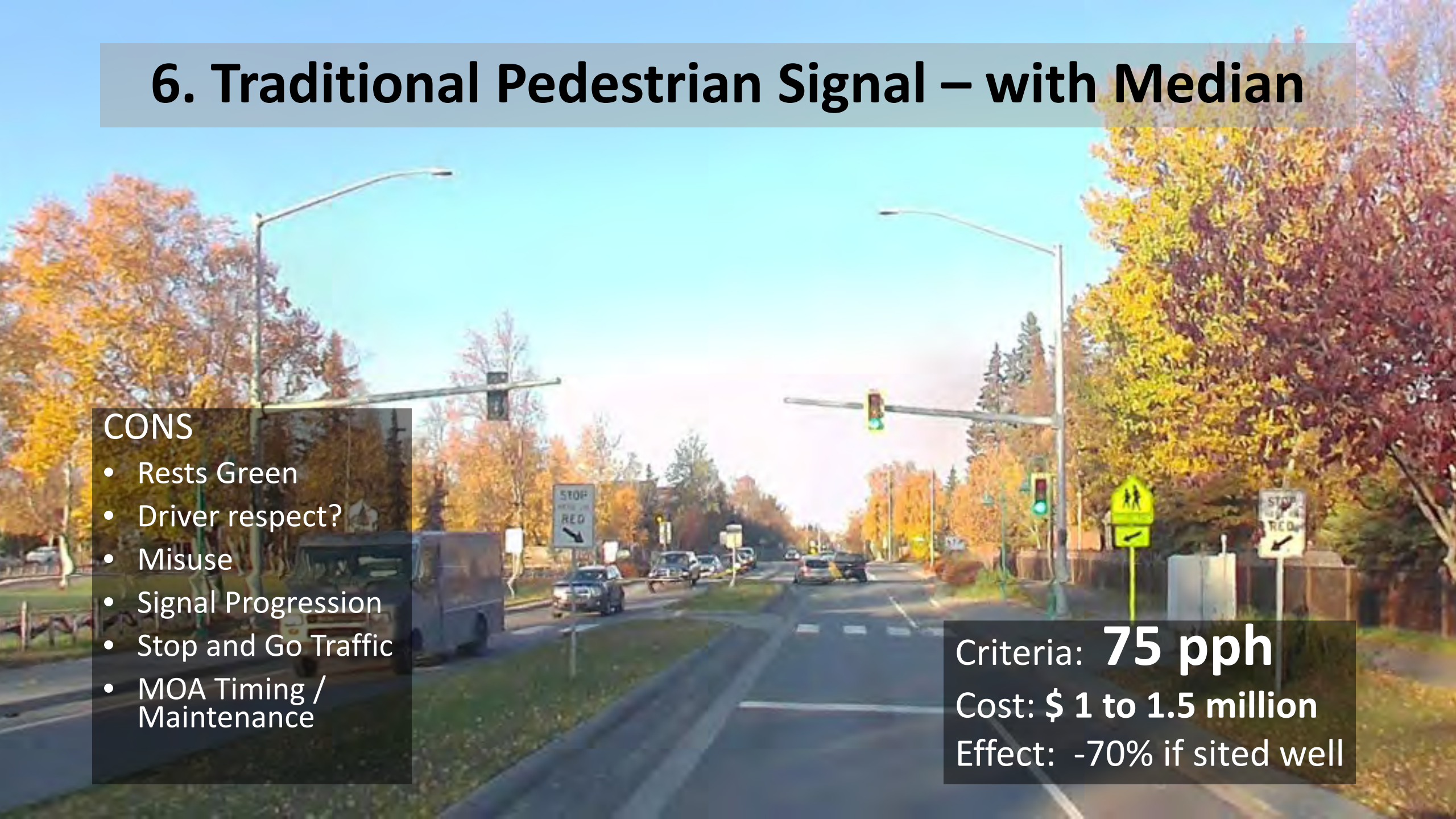
Red Pedestrian Hybrid Beacon

- Criteria: **<u>20 pph</u>** – Not met
- <u>Cost: **$ 1 to 1.5 million**</u>
- <u>Effect: **- 69% ped crashes?**</u>

CONS

- Rests Dark. Legal?
- Limited Studies
- Driver respect?
- Misuse
- Signal Progression
- Stop and Go Traffic
- MOA Timing / Maintenance

6. Traditional Pedestrian Signal – with Median



CONS

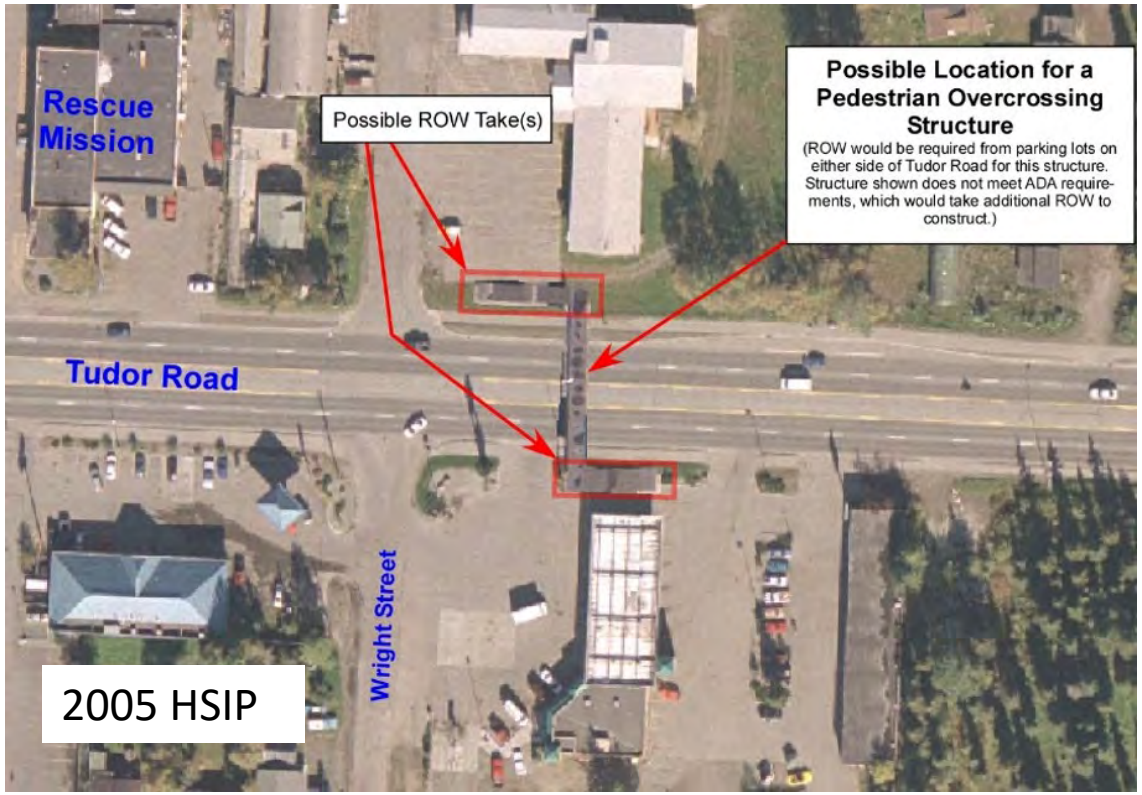
- Rests Green
- Driver respect?
- Misuse
- Signal Progression
- Stop and Go Traffic
- MOA Timing / Maintenance

Criteria: **75 pph**

Cost: **$ 1 to 1.5 million**

Effect: -70% if sited well

7. Pedestrian Bridge



Criteria

150 pph

Cost: **>$5 million+**

Plus ROW, Ramps

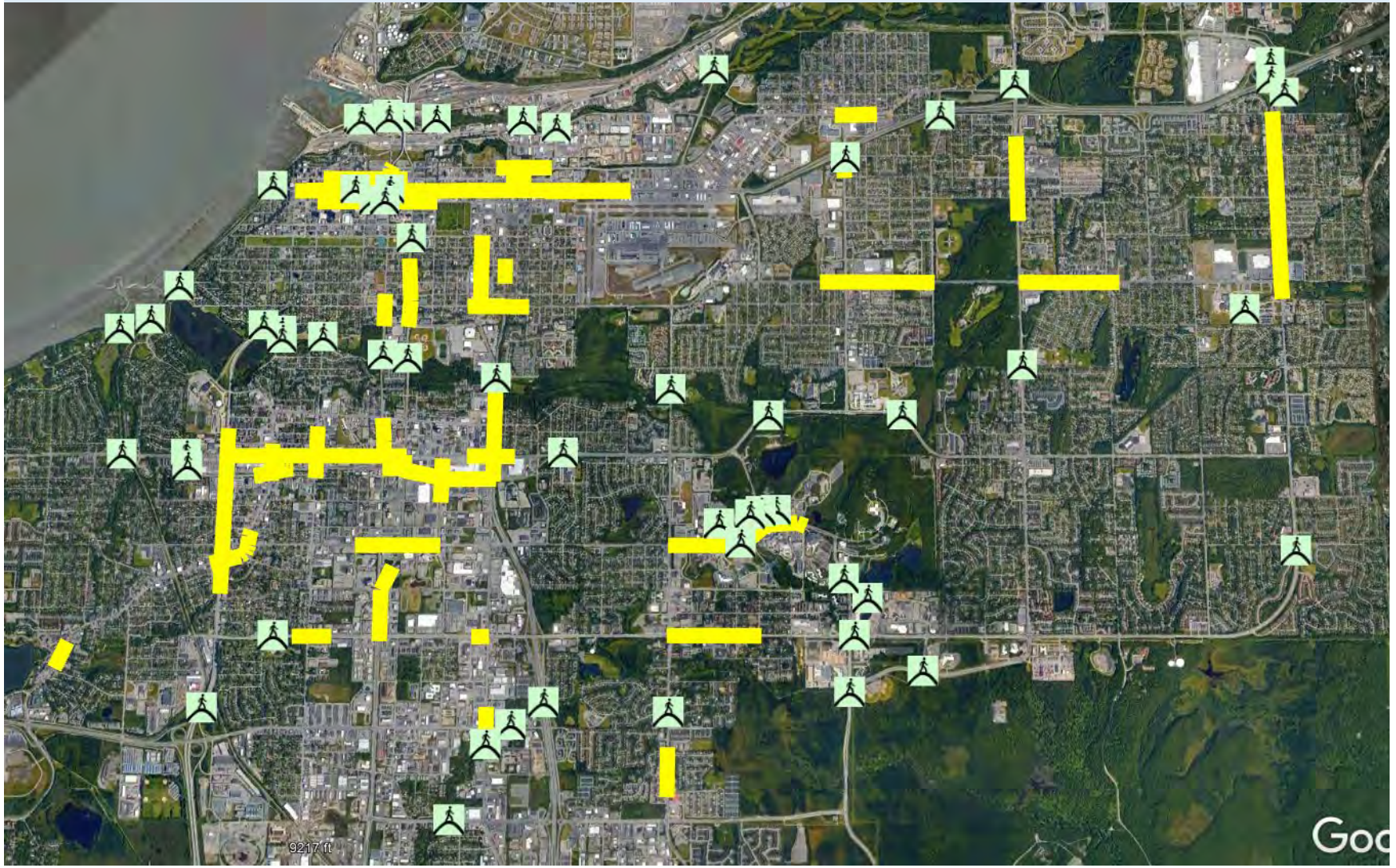
Concerns:

Misuse, security

Maintenance

Oversize loads

7. Pedestrian Bridges to date



70+ structures

Criteria is by choice.

- Parks and Rec Greenbelts focus
- Schools / stairs
- Not today's crash areas.
- Not today's commercial areas.

8. Urban Safety Zone (Double Fines)

SPEEDS
Current Speed Limit 45 MPH.
Median of Pace 43 MPH.
35 MPH is ½ the severity.
Find ways to slow Driver?

PROS: Increased driver attention
Used to define high serious crash areas.

CONS: Increased presence, education commitment.
Ped Visibility, due care as well as motorist due care.
Increased attention to all fronts – plowing, lighting

<u>Requires Policy updates</u> to the MUTCD through ATMS.

Criteria: High Serious Crash Areas
Cost: $50,000 to $500,000 per corridor
Effect: Near Term -45% crashes rural

Beyond basics. Atypical solutions.

9. Urban Traffic Calming

Total rebuild of Tudor Road

Narrow lanes into median, with minimum refuge.

No left turns.

Gateway effect.

Chicanes.

Still 4 lanes.

Ped Xings

10. Move the land use conflict

Put shared land uses on same side of road.

Put land uses elsewhere.

Focus ingress/egress to internal network and signals.

Fencing.

Summary

Completed

1. Remove Traffic (2008)
2. Median Refuge HSIP (2010)
3. Warning Signs HSIP (2016)

Next?

4. Double Lighting HSIP (2021-22)
5. Counts, Expert Study
   Revise Design Criteria
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Request

A. Refer to AMATS Technical Committee for review

B. Report back to AMATS Policy Committee

C. Synchronize with HSIP Program for potential added funding