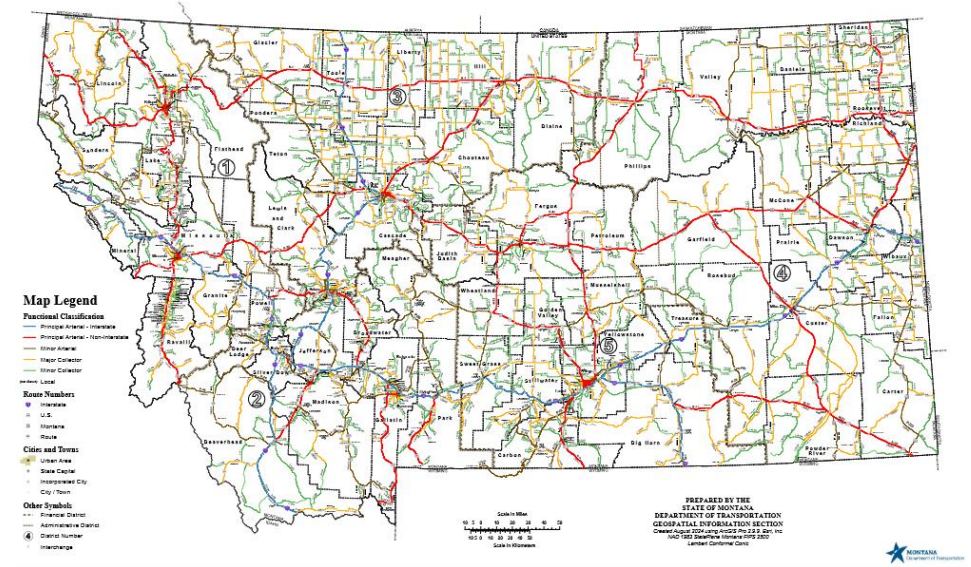


# A Highway Runs Through it Pop-up Traffic Calming on State Highways

Montana Department of Transportation Research Symposium  
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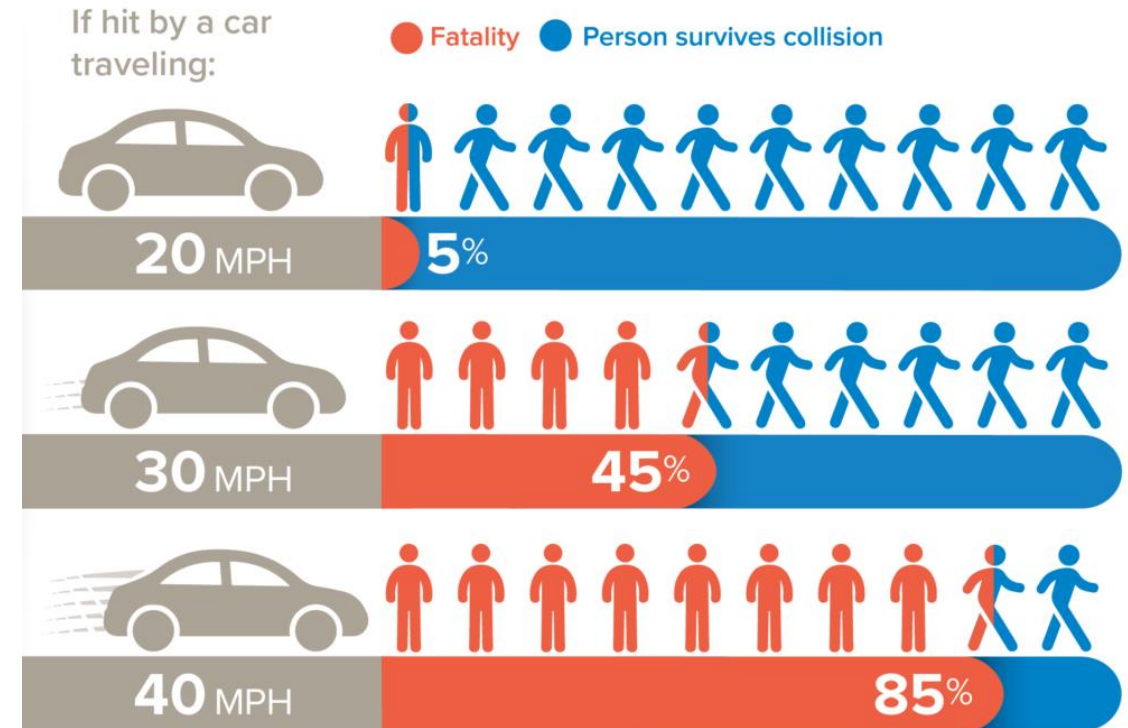


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# Why

- State Hwy/ community economic center
- Safety issues w/ pedestrians and vehicles
- Business owner/resident complaints of speeding

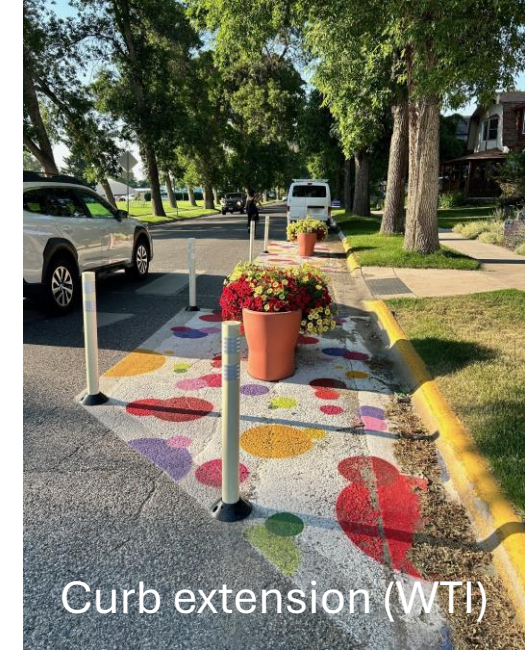


National Traffic Safety Board (2017) Reducing Speeding-Related Crashes Involving Passenger Vehicles. Available from: <https://www.nts.gov/safety/safety-studies/Documents/SS1701.pdf>

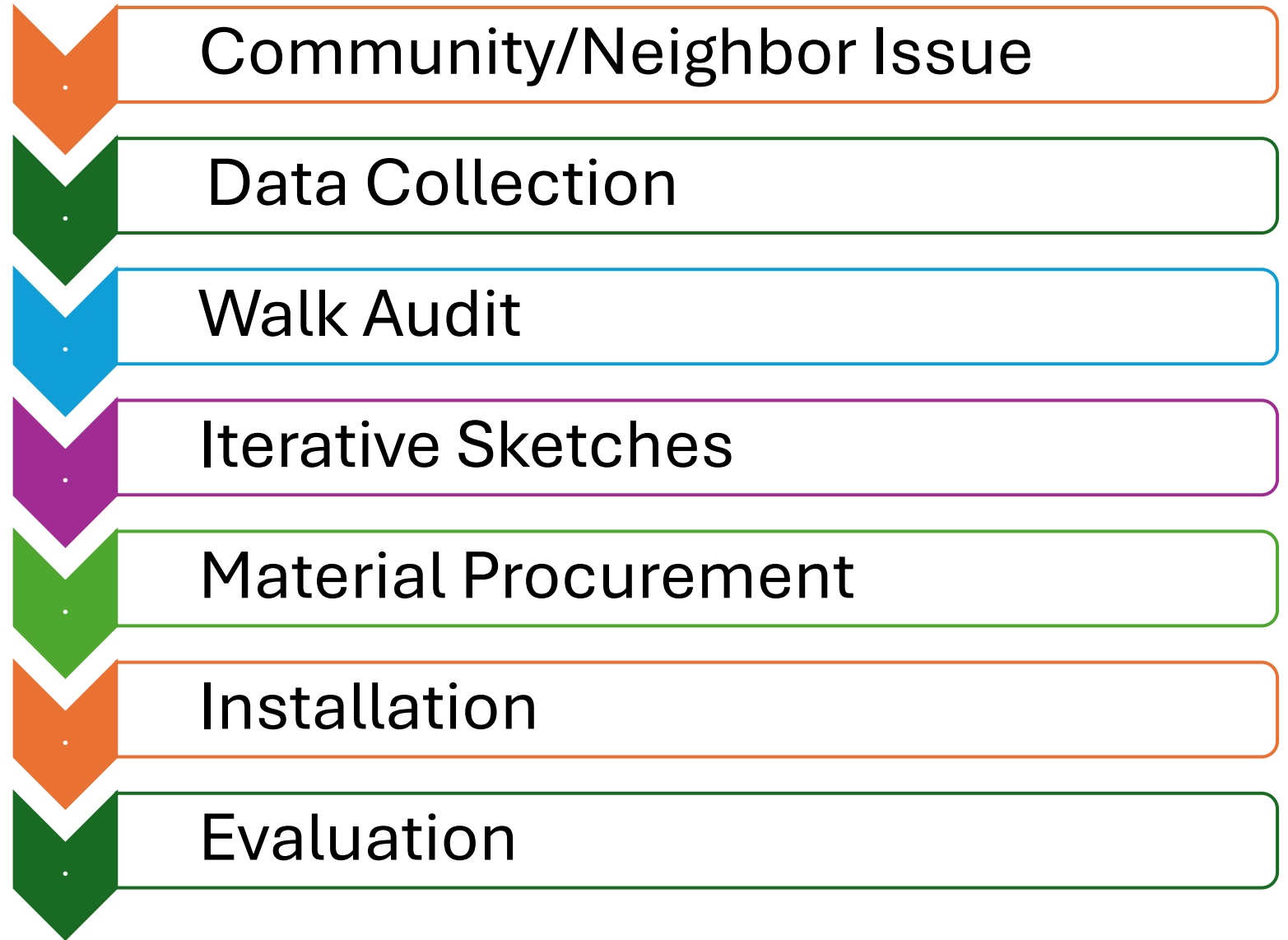


# Pop-up (quick build) traffic calming

- Improve safety
- Respond to residents' concerns
- Short-term action for long term change
- Low cost
- Changeable



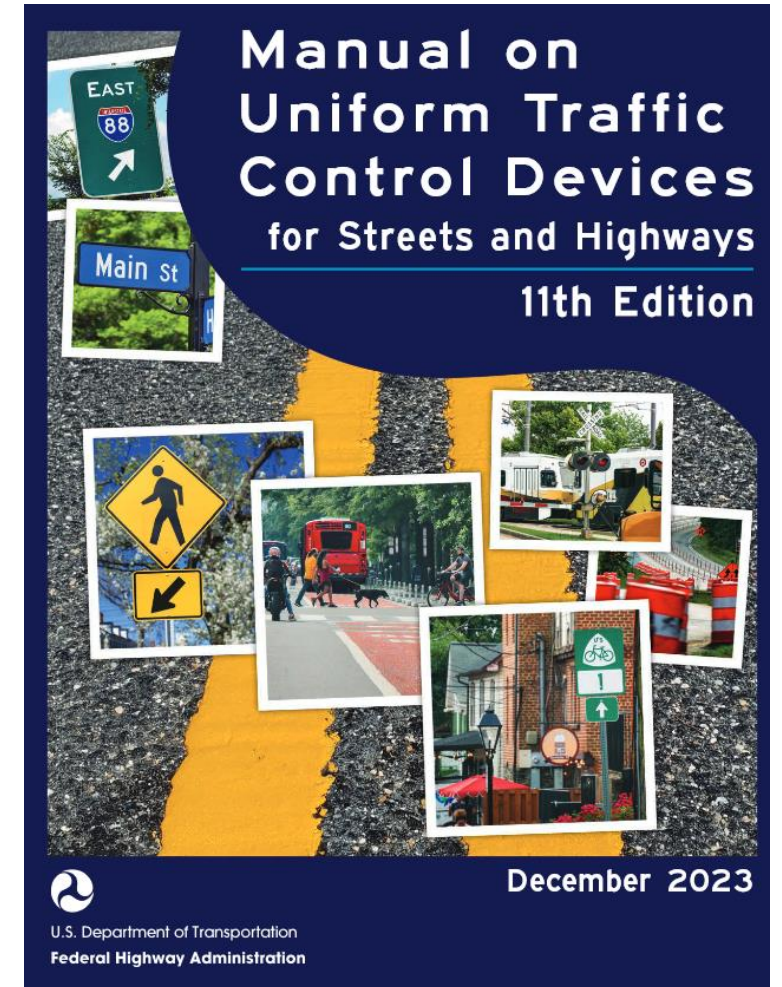
# Pop-up Project Process





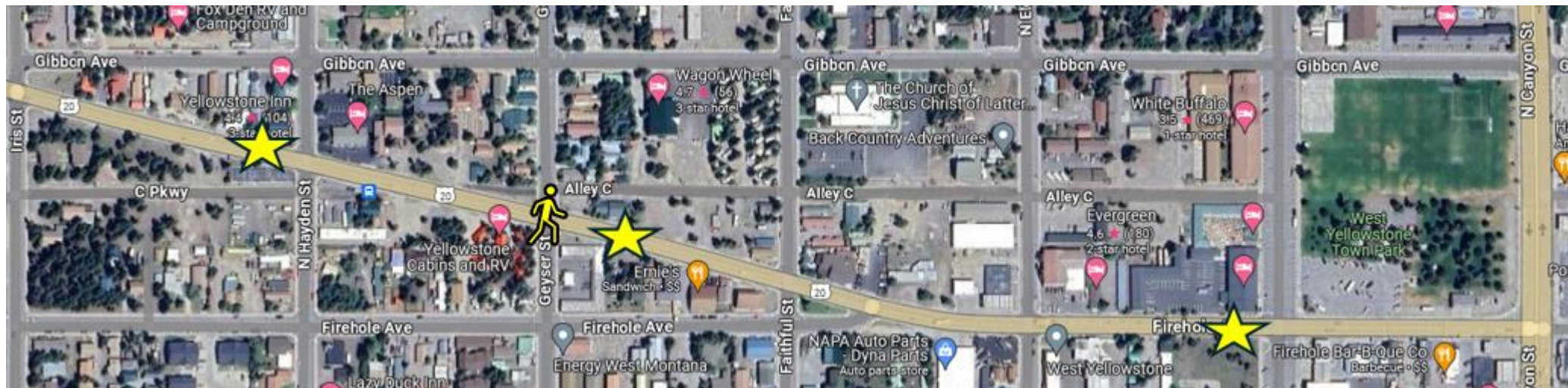
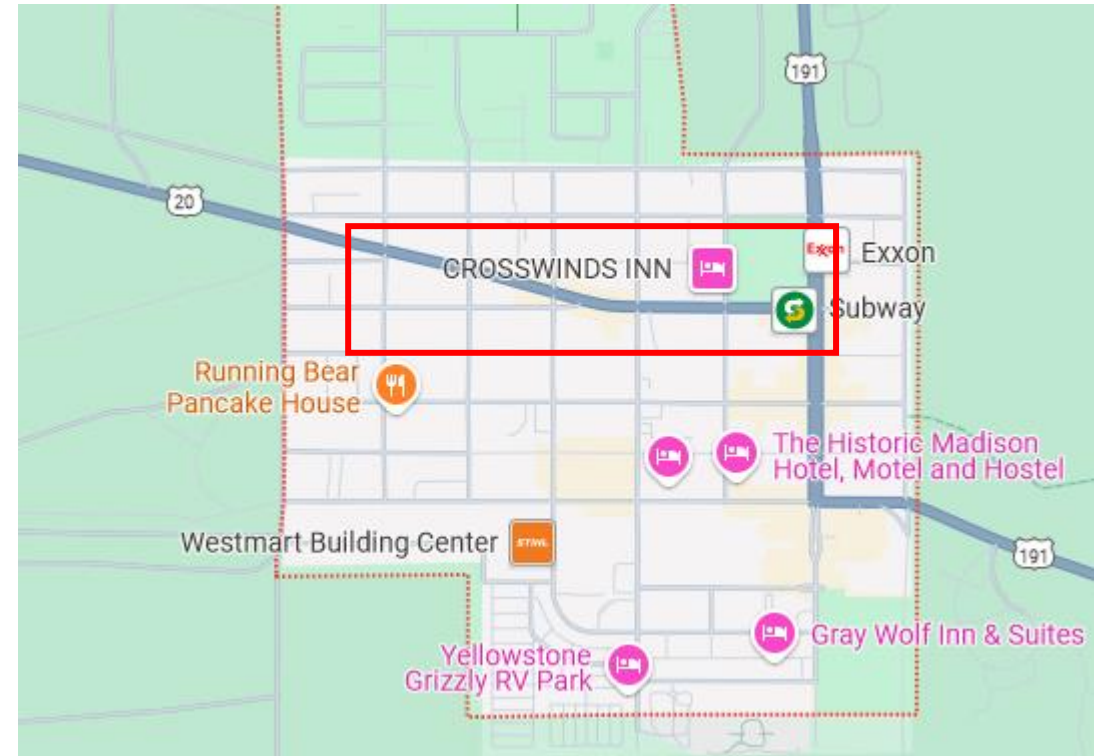
# Pop-up Project Design

- Maximum 25-30 mph speed limit
- Iterative process
- Follow MUTCD
- Durable materials & supplies
- Permission from local agency/encroachment permit



# W. Yellowstone Hwy 20 Traffic Calming

- Highway 20- economic center
- MDT operates & maintains
- Design speed vs actual speed (infrastructure impact on human behavior)
- Posted 25 mph speed limit
- 39' wide, two 12' travel lanes, 7.5' shoulders
- 1 existing crosswalk (at Geyser/school)





# Walk Audit / W. Yellowstone Traffic Calming Goals

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1. Increase pedestrian, bicyclist, and driver safety
2. Slow traffic along the Hwy 20 corridor
3. Make the installation visually appealing






## Gateway Traffic Calming at Hayden and Hwy 20

39' wide Hwy

13-14' from  
centerline to  
flexible &  
reflective  
bollards

12' from  
centerline to  
white line

Planters   
crash worthy  
up to 30 mph,  
self watering

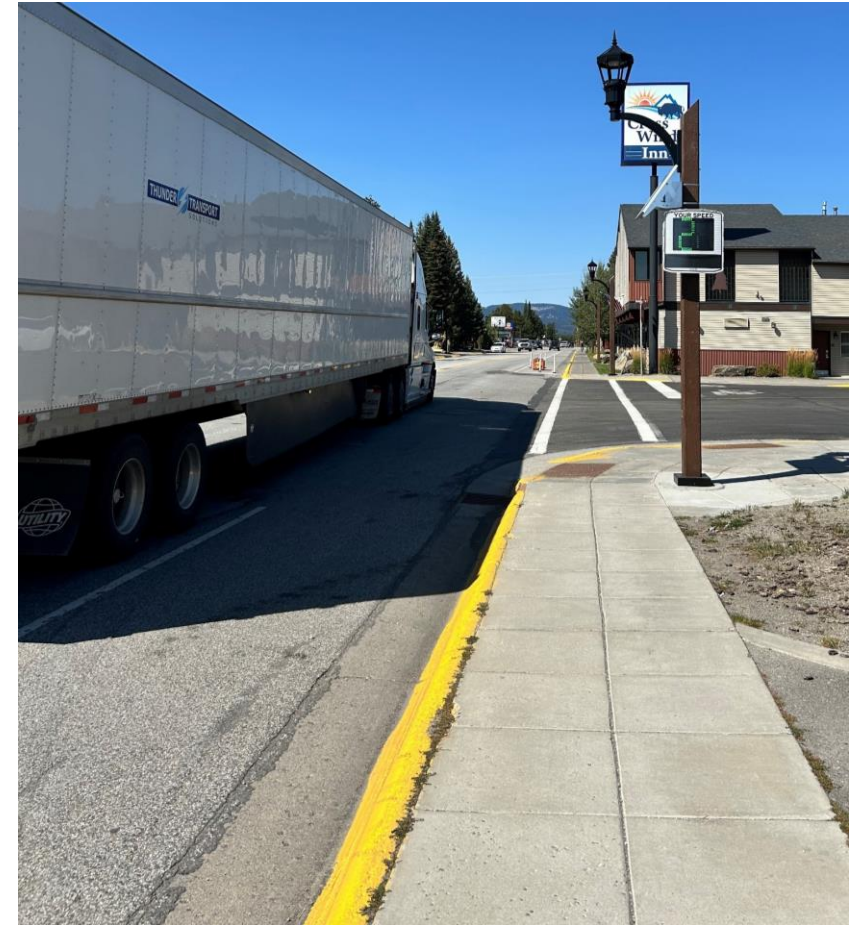




# W. Yellowstone Traffic Calming- Iterative



Initial design lacked consideration for bikes. Planter and bollards moved away from curb and bike symbol added later



City installed radar feedback signs



# W. Yellowstone Hwy 20 Traffic Calming



R1-6 Yield to pedestrians in crosswalk signs





# Data collection/ evaluation

- Vehicle speed and volume
- Driver yielding rates
- Community survey

Eastbound- entering town	Before	During	Change
85 <sup>th</sup> Percentile Speed	32 mph	29 mph	- 3 mph
% Over Speed Limit	66.4%	46.8%	-19.6%
Average Daily Vehicle Volume	2218	3763	+1545

*"The in-road signs at the school crossing on HWY 20 made a big difference. It seems like more people slowed down than before."*

*"Cars on Hwy 20 do not stop for walkers/bikers crossing. My mom rides her scooter all over town and is terrified to cross at Hwy 20 and Geyser."*

# W. Yellowstone Hwy 20 Traffic Calming

## What went well?

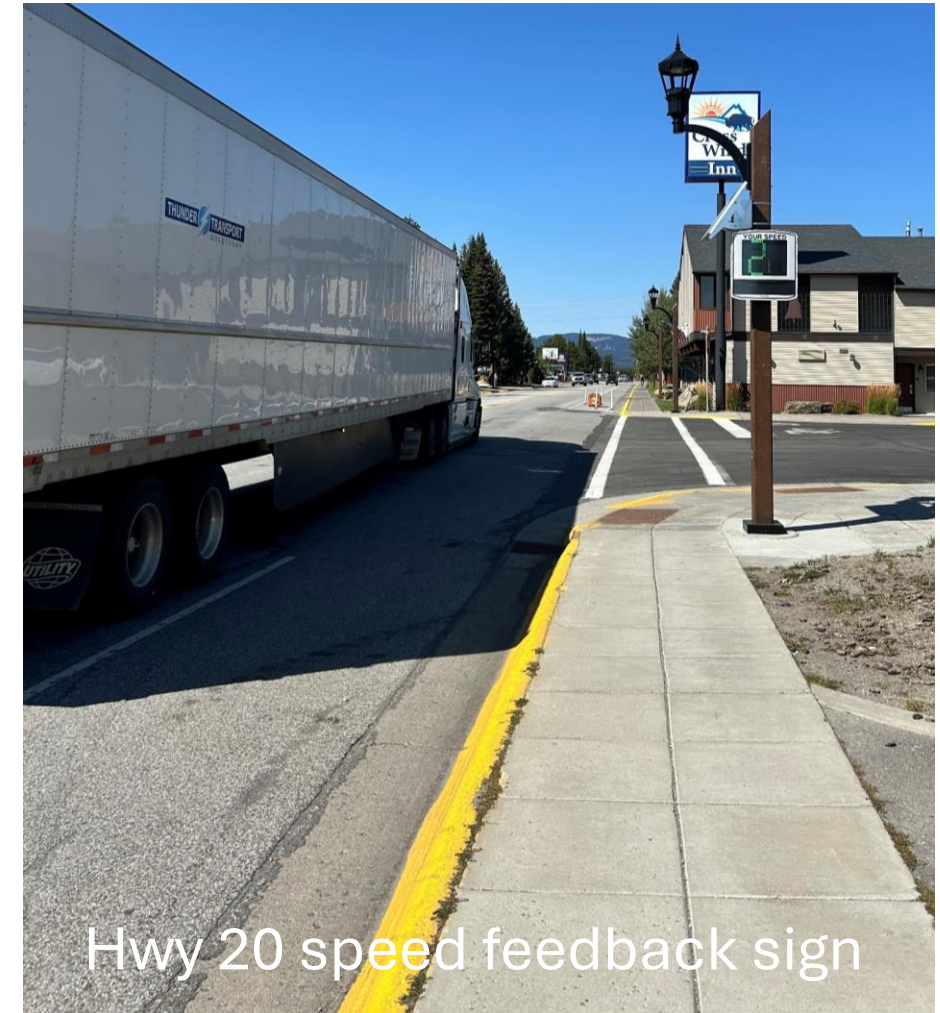
- Initiated by community members
- Strong support from MDT, police chief, public works director, BIAB

## What didn't go as well?

- Walk audit omitted key groups

## Next steps/future research

- Streamline the process for further temporary safety projects on state-controlled roadways in local communities.
- Further research on the combination of treatments that are most effective in matching design speed with posted speed.
- Other ideas



Hwy 20 speed feedback sign



# Resources and Questions

[Montana Pop-up Traffic Calming Guide](#)

[Primer: Pop-up Traffic Calming and placemaking](#)

[Big Sky/ Rural Traffic Calming Toolkit](#)

[Burlington Public Works Quick Build Design + Materials Standards](#)



## POP-UP TRAFFIC CALMING GUIDE

A tool for Montana communities to implement lighter, quicker, and lower-cost complete streets projects

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