

From: [Cory Miskey](#)
To: [Nicole Mardell](#)
Cc: [Paul Bertagna](#)
Subject: FW: Questions about traffic planning
Date: Tuesday, October 13, 2020 2:13:51 PM
Attachments: [image001.png](#)

FYI – Nicole is this something we could share with Council ahead of time? Recommendation? Thanks

Cory Miskey

City Manager

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From: Joe Bessman <Joe@transightconsulting.com>
Sent: Tuesday, October 13, 2020 11:01 AM
To: cobishere@yahoo.com
Cc: Paul Bertagna <pbertagna@ci.sisters.or.us>; Cory Miskey <cmiskey@ci.sisters.or.us>
Subject: FW: Questions about traffic planning

Good morning Susan,

My name is Joe Bessman and I'm a consultant traffic engineer working on behalf of the City of Sisters and am based out of Bend. Paul Bertagna sent me your questions – and they are really good questions! The roadway network in Sisters is part of a broad system managed by several different agencies with often competing goals for local accessibility and through travel. To respond to your questions let me first explain a couple elements of the traffic study for context:

- Highway 20 is an ODOT facility, and ODOT requires that we consider conditions during the fifteen-minute peak of the 30th highest traffic hour of the year. What this means is that any analysis of the State system is effectively reviewing conditions during the peak of a July/August commute hour. Traffic in Sisters can vary by 30-40% seasonally (or more depending on weather), so the conditions being assessed and reported are not "typical" daily conditions. The majority of the time they work better than what will be reported in these studies.
- Forecasting traffic out to the year 2040 is not a perfect science. We don't know all the

changes to technology, society, or work patterns. Will we see continued work from home trends, or will this be balanced with increased tourism on our highways? We look at these traffic projections based on the State population and employment projections that are allocated from the State and we look at historical trends, but as the recession in 2008 and the entire year 2020 shows there are several factors beyond our control.

- When we report traffic operations we are reporting conditions for the highest-delay movement. Typically this is the left-turn from the minor (non-Highway) approach. When a left-turn operates with high delay, the through movement may have slightly less delay and the right-turn could have considerably less still. Specific to the intersection with Pine Street, US 20 through traffic experiences delay only from pedestrian crossings or upstream delays/queuing.
- The July 16, 2020 traffic counts (yes an odd year due to COVID but very similar traffic levels as 2019) show that at Pine Street there are 72 northbound vehicles during the peak commute hour (4:00 to 5:00 p.m.). Of these, 23 are northbound left-turns. In the southbound direction there are 82 vehicles, with only 15 left-turns. When we think about restrictions we consider the impact of these 38 left turns in proportion to the overall 154 minor trips being made.
- Crashes at the intersection of US 20/Pine have been moderate both recently and historically. Looking at the ODOT crash database, most of the crashes appear to have been rear-end collisions on the highway, when drivers stop for unanticipated reasons. The Cascade Avenue improvements in 2014 added separate left-turn lanes to address these patterns and separate the turning from through vehicles. This widening comes with trade-offs – a wider pavement section for pedestrians to cross, more potential that vehicles will not see a pedestrian crossing, and higher speeds on the highway as we've taken the decelerating/turning vehicles out of the flow. However, there were no reported crashes in 2015 or 2016, and two crashes in 2017 (one rear-end on the highway and one from a pedestrian crossing). This is a crash rate of 0.27 per million entering vehicles, or probably about average for a four-legged unsignalized intersection. ODOT just released its 2018 and 2019 data so we will take a look at that as soon as we can compile and map it.

While the City requires that development projects mitigate their impacts, the City (in coordination with Deschutes County and ODOT) is managing the overall network and overseeing the review of each of the development projects while fine tuning this overall plan. What we see at Pine Street is the same issue we see at Oak, Elm, Fir, Spruce, Larch, Hood, and really every other unsignalized intersection with the highway in Sisters. The overall management strategy is contained within the City's Transportation System Plan, which included extensive community input on the tradeoffs and design decisions. The decision in this plan was made to maintain the current highway alignment and two-lane design, but supplement highway travel with the Alternate Route along Locust and Barclay, with roundabouts at each end of the route to safely get back onto the highway. These efforts are underway but are not yet complete because of the costs, land acquisition, and utility relocations that are required. The Barclay roundabout is in place on Sisters' western edge (which allowed turning restrictions to be installed at Rail Way), and the Locust roundabout is currently in the design phase but likely a couple years out. Until this second roundabout is in place we really can't restrict other intersections as it would only move the traffic to other locations that are also incapable of accommodating it.

There are two significant development projects located near the Barclay/Pine intersection. The

project north of Barclay is industrial, the Forest Service lands to the south includes a higher proportion of residential uses. While there might be some limited amount of development on these properties in the next two years, these are longer-term projects that we don't anticipate building out for at least five to ten years. With their location next to the Best Western we expect that traffic from these developments will predominantly use the Barclay roundabout for left-turns onto the highway (especially during the peak times), and there is capacity available for this traffic. Within the next couple years the Locust roundabout with US 20 will be complete, and the most direct route toward Redmond/Bend will be to use this new roundabout from the alternate route. These developments are both paying their "pro-rata" share toward the roundabout, and they are also paying into the City's Transportation System Development Charges which fund these regional improvements.

Our concern is that if we were to restrict access at Pine today there is nowhere safe for this traffic to go. Once we have the roundabout at Locust we have the option of restricting movements, but we will monitor safety and operations to see if there's still a need with the alternate route helping alleviate Cascade Avenue. I hope this provides more context and helps explain our response to the applications better! Your questions are the same questions we are asking ourselves and monitoring as we obtain more current information and see where in Sisters the growth is occurring. I would be happy to further discuss any questions you have on this.

Take care,
Joe

Joe Bessman, PE
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From: Paul Bertagna <pbertagna@ci.sisters.or.us>
Sent: Monday, October 12, 2020 5:14 PM
To: Joe Bessman <Joe@transightconsulting.com>
Subject: FW: Questions about traffic planning

Hey Joe,

Can you provide some feedback to the inquiry below?

Thanks a lot

Paul Bertagna
Public Works Director

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From: Susan <cobishere@yahoo.com>
Sent: Monday, October 12, 2020 4:50 PM
To: Cory Misley <cmisley@ci.sisters.or.us>
Cc: Paul Bertagna <pbertagna@ci.sisters.or.us>
Subject: Questions about traffic planning

Hello Cory and Paul,

I have been asked about the Pine Street intersection with HWY 20 as to what the City is Planning per the proposed new development. So I have been doing some reading. While reading the plan specific to mitigating traffic concerns due to the new development planned for North/West Sisters, I found two statements a bit concerning. Hope you or your staff can help me understand this better. Note highlighted areas:

N Pine Street at US Highway 20

The intersection of N Pine Street at US Highway 20 is projected to exceed ODOT's maximum v/c ratio of 0.85 under year 2040 planning horizon conditions. This is due primarily to a relatively high northbound left-turn volume from N Pine Street onto US Highway 20. The intersection operates acceptably for existing conditions, but delays increase in future years, regardless of the zoning change of the project site. **No mitigations to improve capacity are recommended at this intersection for the following reason:** • During peak hours when delays are long, **drivers will self-select how they enter US Highway 20** to avoid excessive delays. Local traffic may choose a number of other routes to avoid US Highway 20 and utilize the local street system. In addition, the **Motor Vehicle Master Plan Projects table (Table 7-5) in the City's TSP Refinement lists a possible mitigation of restricting northbound and southbound approaches at the intersection to right-turns only.** The intersection should be monitored to determine whether these movement restrictions become necessary in the future

drivers will self-select how they enter US Highway 20 - this is what we do today. But as more traffic is created onto Pine street from new businesses, shopping areas and residences in the new development; those drivers only have the Pine or Barkley accesses to HWY 20 - there are no other N. bound options so one would have to go south to find an alternative to go north on HWY20. This seems a stretch in expectations. Also concerning, is that as noted above - that intersection is ALREADY seeing high northbound traffic off of Pine onto HWY 20 and experiencing too many accidents.

lists a possible mitigation of restricting northbound and southbound approaches at

the intersection to right-turns only. That this is a POSSIBLE rather than an actual plan for this intersecion relative to this project is also of some concern. I think the City needs to assure this would be inplace even before the project gets going.

To Better Times, Susan