Crash Analysis Studio – Durango, Colorado Session Transcript

Introductory Trailer

Chuck Marohn: I want to give you two scenarios. Scenario number one a plane crashes. Scenario number two, two cars collide. In scenario number one, we pull out all the stops – we bring in the NTSB, we try to figure out exactly what went wrong. Scenario number two – we send out the cops, we sweep up the mess, and we go on our way.

John Pattison: If we, collectively – everyone on this call and the broader Strong Towns movement – if we do this right, we're going to save thousands of lives.

Edward Erfurt: Mayors and local council members want to do the right thing. They have the ability to solve it. We're going to help provide those tools for them.

Session

Tony Harris: All right. Hi everyone. I know people are still filing in, but I am going to slowly get us started. So I will start off by saying thank you for joining us on this summer Friday, and let me welcome you to the Strong Towns Crash Analysis Studio.

We are glad that you took some time to be here with us today. My name is Tony Harris. I'm the action team coordinator at Strong Towns. And in a couple moments I will introduce you to the rest of our expert panel. But first I'd like to talk about why we're here today. So the National Safety Council estimates that over 44,000 people died in automobile crashes in the United States. Throughout 2023 thousands more suffered traumatic injuries during these collisions. And despite the best efforts of the public safety officials, these crashes are still happening and affecting all of our lives.

Now, there's a prevalent misconception that car crashes are caused solely by mistakes that drivers make. Looking at your phone, changing the radio, drinking alcohol, speeding. When a

crash occurs, the North American response is to send out law enforcement and insurance agencies to assign blame. We ask questions like, who made the mistake that caused this crash and who should we blame?

The reality though is that car crashes are caused by multiple factors, not just driver error. When a traumatic crash occurs, we need to identify all the contributing factors and learn all we can from the experience so that we can reduce the number of deaths and traumatic injuries in our communities.

So what you're going to see now is a crash analysis studio session, drawing from the best practices of the medical profession. We've convened a panel to review a crash that happened in Durango, Colorado. This was a fatal crash where a motorist struck a pedestrian as they were both headed north on Animas View Drive.

So today I'll start by introducing you to our panel, then review the facts of the crash, and with our guests, we will assess the design factors that contributed to this collision.

I want to emphasize our goal is not to assign blame, but our objective is to learn as much as possible about what happened and identify the many factors that contributed to this unfortunate event.

So before we get into the details and talk with our experts, we need to begin with the fact that this tragedy resulted in the death of KDC Grest. Please take a moment of silence with me to honor and acknowledge her and the loss of her life.

Thank you. So I'm now going to introduce our expert panel for today. First, we have Anthony Catania, who is a professionally trained architect, urban designer, and the founder of a MC Architecture and Design LLC. Anthony established his own practice to focus on the design of traditional urban building types and walkable urban environments. Prior to establishing a MC,

Anthony worked in architecture and urban design in Washington DC for seven years, and he relocated his practice to the Oklahoma City area in early 2023 to better serve his clients and contribute to growth in that metropolitan area. Anthony earned a Master of Architecture from the University of Notre Dame and a Bachelor of Humanities and Arts from Carnegie Mellon University.

So welcome Anthony.

Anthony Catania: Thanks, Tony.

Tony Harris: Next we have Nancy Dosdall, who is a senior planner and project manager With over 35 years of experience in land use planning and entitlement, she is skilled with public engagement and finding common ground amongst stakeholders to develop community supported plans. On a personal level, Nancy is passionate about pedestrian and bike planning, and she has biked Animas View drive many times and considers herself to be a local safety enthusiast in Durango.

Next we have Rich Fletcher, who is a longtime Durango resident, a cycling coach and cyclist who used to live on Animas View Drive several years ago. And he is the owner of Solo Arts LLC, and for many years was an owner and senior partner at Animas Media LLC. Now, rich is an experienced director with an award-winning history in the media production industry, and he is also interested in events management and photography. So Rich joined us today as a Concerned Community member.

And then finally we have Chuck Marohn, who is the president and founder of Strong Towns, a civil engineer and author of the book, confessions of a Recovering Engineer, transportation for a Strong Town. And Chuck developed the initial idea for the Crash Analysis Studio.

So now I'm going to walk us through the details of this crash in Durango, and I'm gonna do that by sharing my screen, pulling up a small presentation here.

So let's start with what we know about this crash. We know that 27-year-old Katie Siegrist was walking north along Animas View Drive just prior to the collision. And 66-year-old Olivia Burkhart was driving north in a 1987 Jeep Wrangler when she collided into Siegrist. And I wanted to note that they were both headed in the same direction because Burkhart stated that she didn't see Siegrist until the last possible second.

Now, we know the crash occurred at 7:46 PM on September 14th, 2023, and the police stated it was raining at the time of the crash and that this segment of Animas View Drive is poorly lit during darker times of day.

We also know that egress was transported to St. Mary's Medical Center in Grand Junction after the collision, and at that time she was in critical condition.

Media coverage tells us that egress died in a Grand Junction hospital on the 19th, so that would've been five days after the crash.

Now the crash report tells us that the motorist Burkhart stopped after the collision and was cooperative with law enforcement and the commander from the police report. Police department reported the following in some media coverage that we found. They indicated that neither drugs nor alcohol were thought to be contributing factors in this crash.

They stated that charges were not filed against Burkart and then they also stated that Egress was wearing dark clothes and did not have a flashlight or reflective gear on at the time of the collision.

So on this slide you can see the crash location marked by a red pin, and you can see that Animas View drive runs parallel to Main Avenue.

And then on this slide we've zoomed into the crash location a little bit closer. And what we've done here is we've illustrated Siegrist as this yellow rectangle heading north and then burkhart as the orange rectangle also headed in the same direction.

And then we've outlined the approximate crash location in red and we use GPS coordinates from the crash report to help us indicate where that crash location would would be.

So we know that the speed limit on Animas View drive is 25 miles per hour and the volume of vehicles that move through here on a daily basis averages around 500.

Now this part of Animas does not feature traffic signals or crosswalks, though there are a few trolley stops in this area.

And just a little more on the overall conditions of the location. Animas View Drive has two through traffic lanes. One is northbound and one is southbound. We also know that the speed limit was reduced from 35 miles per hour to 25 miles per hour in 2021. And there are dense residential areas to both the north and south ends of Animas View drive with the campground being located a little bit closer to the southern end.

And then there have been some recent changes to Animas View Drive to make it safer, and we're gonna review those a little bit later in the presentation too.

So our nominator for this session, Andrew Allport was very helpful in the information gathering process. He submitted a Colorado Open Records Act request to get access to a number of documents and pieces of data relevant to this particular collision. So to my understanding, this request is how he sourced some of the photos that we're gonna review right now.

So here we have a shot of the approximate crash location and I wanna call attention to the width of the shoulder here since this segment seems to be pretty slim to me, right? One can imagine that walking along this road when it's wet and dark might be difficult, potentially dangerous.

And then here are two photos that are taken nearby and these show the area at night. So you can tell that visibility falls quite a bit here after dark, even when there are bright artificial lights on the scene.

And then on this slide we've included two photos, one to the west of the collision location and then one to the north. So the photo on the left shows some brush and shrubbery that's next to the southbound lane on Animas View drive. And then the shot on the right illustrates the grassy area that you're gonna see if you continue walking north along Animas.

Now, United Campground, that's the campground I mentioned earlier is situated just a little bit northeast of the collision location. And you can see one of the camp buildings in the photo on the left. And then in the photo on the right, you're gonna see the trolley stop that is located north of the crash location, just outside of what I believe is the main entrance to the camp.

And then I wanted to include these two photos here to show what it might be like to drive toward the crash location at night as a northbound motorist.

And then this final shot shows us approaching the crash location again, just from a little bit closer of a vantage point than was illustrated in the last slide. So our nominator Andrew helped get measurements of the intersection or the location, I should say, where the crash took place. So you can see each through traffic lane here is 10 feet wide, and then that shoulder area actually varies a little bit, right? So in my communications with Andrew, he was saying it might measure six inches in one area and up to 12 inches in another. So for our purposes today, I just

went ahead and illustrated each shoulder as one foot wide and that makes the total width of Animas View 22 feet.

Now, there was a community meeting to discuss Animas View drive on May 22nd, and I'm pretty sure that this was a follow-up to some earlier community gatherings about Animas View drive that have happened since the collision occurred. I remember reading about a community meeting that happened in November, I believe too. So some materials from this meeting that that happened in may indicate that the following improvements have occurred on Animas View drive. There were flags on speed limit signs that have been replaced. There are orange flags, and I believe these are intended to draw motorist attention to the speed limit.

There's also a United Campground streetlight that has been re replaced or repaired, and then pedestrian and bicycle inroad flashing warning signs have also been installed.

And then a couple other improvements were listed as still in process. And these included adding share rows or shared lane markings to Animas View drive, clearing up brush and vegetation on either side of the road, and then also installing additional street lighting. And I wanted to point out that these improvements line up with what was outlined as expected actions in a press release that was dated from March of this year.

Now it's my understanding that the city also contracted tool design, which is a firm that strong towns is pretty familiar with and has worked with before to perform an analysis and make some recommendations on how to improve safety along Animas View drive. So tool released a report in early May and they suggested that the city pursue automated speed enforcement insert crosswalks at some of the trolley or transit stops in this area. They also suggested that the city create advisory shoulders along the roadway and engage in active transportation demand management management. There was some suggestion of introducing traffic calming features and that could include, you know, raised crosswalks, curb extensions, potentially a mini traffic circle or pinch points.

And then there was also talk of the possibility of expanding gravel shoulders and putting in rumble strips as well.

And then it also came to my attention that the city is considering turning Animas View drive into a one-way southbound street. And as I was poking around online, I came across a survey on a city website page that seemed to be asking for local input about some of these different measures.

So the overall development pattern here to me shows some rural and suburban characteristics. So Animas View drive shoots off of main Avenue, also known as Route five 50 to the south near West Second Avenue, and then it rejoins Route five 50 north of the crash location. And I also wanted to point out that Animas View Drive is a former county road that was annexed by the city. It was never brought into code as it was developed with those more dense residential areas to the north and south.

So this surrounding area map illustrates some of what I was referencing. And you can see if you look down south, you can see kind of the connection to five 50 and then up north just beyond the United campgrounds, the connection to five 50 up there as well.

And then the Durango Police Department conducted a speed study in late September to early October of 2023, and we pulled from their data, which was included in that request that Andrew submitted, and we looked at a week's worth of information. So from September 26th through October 2nd, and we looked specifically at the hours between 5:00 PM and 10:00 PM on each day. So we chose that window because the crash happened at 7:46 PM and we were interested in getting just like a smaller sampling of what evening traffic in particular might look like to help us understand, you know, what speed looks like in this area.

So of the 669 cars tracked, 83% were going over the speed limit. 20% of drivers were going more than 10 miles per hour over the limit. So they would've been driving at 36 miles per hour or faster. And then 85% of drivers were calculated to be traveling at or below that 36 to 40 mile per hour speed range that the police department tracked.

So I'm going to stop sharing my screen and I would like to turn to our panel so that we can talk through some of the factors that might be at work here. Anthony, if I could start with you, you know, could you tell us what you think might have contributed to this crash? And I'm gonna invite you to feel free to use screen share if you wanna point anything out on Google Maps or any other materials.

Anthony Catania: Okay, thank you again for having me, Tony. Happy to be here. So, so interestingly, when, when I was first sent the information about this crash, I obviously took to Street View right away and, and I happened to drop myself down at a spot that's only about 50 yards down the road, I believe, to the south from the, the location of the crash. And right on street View, you see someone, someone walking probably in a very, in the same direction and in a very similar way as the victim here, kind of within the, within the travel lane heading northbound on Animas View drive here. And so, you know, one of the things that, one of the things that tends to happen when you stripe stripe a roadway like this where you have the the double yellow line down the center and you stripe the white line along the edge of the road is you're, you're giving the driver the impression that that space belongs to them and therefore they're much less likely to anticipate any kind of obstacles within that space when you stripe it for them in this way.

And so, you know, Chuck has talked about this phenomenon before, but it, I think this really gives the driver a false sense of safety and they tend to drive faster. And you can see from the data that you just presented that that's definitely what's happening here. Folks are driving, in some cases more than 10 miles an hour over the speed limit, which is saying that this design configuration is really designing for speeds that are 35 miles an hour or more. The street is not

really designed for the 25 miles an hour that is, that's desired in this case. So I think the, I think the first, the first contributing factor is the way in which the, the roadway is striped.

The other, some of the more obvious things that we talked about is just the idea that there really isn't any space outside of the, the striped edge of the lane for for folks to, to walk or bike along most lengths of the roadway here, the, the lighting where there is lighting, I think it's, from what I saw from the images that you presented earlier, the lighting is actually creating more of a glare and making it even more difficult to see pedestrians that may be walking along the edge of the road than, than other ways of lighting the street. So I think some, some better taking another look at how, how the lighting and where the lighting is placed is important, but we're gonna get to the recommendations here in a minute.

The other question for you, Tony, are are there any stop signs along the length of Animas View drive between Durango and I think kind of the point where it meets back up with Main Street a way in which to kind of intervals in which to slow drivers down? Are there any stop signs here?

Tony Harris:
That's a great question. I would refer probably to Nancy or to Rich if they have knowledge of any stop signs. I haven't seen any,

Chuck Marohn:
I I didn't see any show up on Google map.

Nancy Dosdall: No, I I don't think there are any stop signs. There's no cross traffic. There's driveways and entrances to the, the park parking lot, but no, no cross streets.

Rich Fletcher: The, the biggest factor in, in this road being really dangerous for pedestrians and cyclists like myself, I'm on this road at least every week except in the winter, of course it, there,

there has been so much, I've been here since 75. There have been so many developments done along this stretch of road and no compensatory allowances given to the road that through which these things are accessed. So you have higher traffic volume, you still have a very narrow county road and there are no stop signs.

Anthony Catania: Okay, well I'd like to talk a little bit more about that whenever we, whenever we come back around and, and talk about the, the recommendations.

Tony Harris: Sure. Got it. Thank you Anthony, maybe we go to Nancy next then if, if we're ready.

Nancy Dosdall: Sure. So do you have a question for me, Tony, or how do you

Tony Harris: Yeah, yeah, sorry. So just anything in, in regards to factors or what you're seeing like in the, the built environment or the design of this, this roadway that might have contributed to the collision.

Nancy Dosdall: Sure. And so maybe follow up on Rich's recent point is normal city of Durango development processes would be, if you were developing, you would put in sidewalks and carbon gutter on the street.

In this case it didn't happen in these older, these developments. I'm honestly not sure why, although I'm thinking that the width, the constrained width really, that the city must have said, well, there's nothing to connect to with the sidewalks and no room to put them in. When we, we zoom in on the, that site, I'm not really sure where you would have room for sidewalks. The the topography is very steep also so that, you know, the, the new development on the east side of the road is pushed up pretty close to the road and then the, it goes up high to on the western side. I guess a couple things I'd wanna point out is that in the recent past, the city extended a

citywide river trail to outlet, it's 11 mile type trail, pedestrian bikes only it outlets on Animas View drive.

That's probably the newest development in the area, but it's definitely, I I would say contributing to even more bikes and more pedestrians on that road. So people that live on the road probably are walking down to the park to access the river and the river trail where in the past maybe they wouldn't have done that.

I guess the other thing I sort of wanna point out maybe that we haven't talked about is, is it's, I thought to myself, you know, I've cycled on this road many, many times, but I'm not sure I've ever driven on it. And it is a redundant road if you are heading north, it's quicker, easier to stay on Highway five 50. And it seems to me that it, the traffic that's on AMS View drive should probably be local traffic of people that live there. But obviously in this crash scenario that wasn't the case.

The driver was through driver heading headed to residential areas much farther north. So sort of interesting whether there might be a way to further discourage people from using that when they don't live on it. And I think that's where maybe the one way idea is coming, coming into play as a discouragement.

Tony Harris: Great, thank you. Yeah, it's helpful to hear about the, the river trail outletting on Animas V Drive, especially if you think it's maybe contributing to more pedestrians or cyclists funneling into an area that seems to be lacking some pedestrian infrastructure. Right. Great. Okay, maybe rich, anything on on factors or anything additional you'd like to add in?

Rich Fletcher: I would just like to lend my support to the things that Nancy brought up. I agree with them. The River park area has brought many more cars onto that road. There is a road 32nd street, which is part of a, a citywide, a lovely walkway and bicycles use it and people with baby strollers and everything that goes from the southern part of the town to the area where

they just installed this park access along Animas View drive. And so not only cars going into a parking lot that was developed a couple years ago, but also many more bikes.

I, I agree with Nancy that it is unlikely that we will be able to put sidewalks in there just because of the terrain. It's steep. There is great amount of fall off to the right of anyone on that road rock walking to the north, which is why the body of a person walking to the north would be in the scene that we saw of the gal in the red colored dress completely in the path of cars. That's normal because the, the road as most of 'em do rolls off and if you're trying to tread on something that's six to 12 inches wide, you're not going to get a real good footing, especially if it's wet and slippery.

So I, the only thing I can think of just off the top of my head where I live, mm, 32nd street area, it's closed right now to anyone but people who live in that area, right? So they can have access.

Why can we not do something like that with Animas pew unless informing people that unless your car is going to be parked at the river access or you are a, excuse me, an owner of a place or a renter on Animas View drive shouldn't be on that road.

Tony Harris: Definitely. That's a great point. Thanks for elaborating on that. Okay, Chuck, anything further from you?

Chuck Marohn: I've just got a couple things to add and I, I I think actually Anthony's analysis was spot on. There's not a lot to add to that except I I I, I think a couple nuance points to build on it. First, it seems to me, and I think maybe Nancy and Rich can confirm this, that I, and I think I read this somewhere, that Animas View drive used to be the highway, the highway that used to be the highway alignment.

You, you, you get a sense, everybody's nodding, so I'm gonna, I'm gonna proceed with that as the case.

You get a sense that what, what happened was the traffic volumes or everything just kind of matured and grew up, right, like reached the next phase of development. And so the highway was built essentially adjacent to this one and this one was turned back over to the city to, to maintain and manage. When, when we look at this, there's two, there's two like kind of conflicting anchor points here in that transaction. The first one is that the old highway, the new Animas View drive is too highway esque. It's too, it's like over-engineered and overbuilt to be a, a little sleepy residential street, right?

The development too is lower than what the highway engineering would require. So there's a, there's a, there's a mismatch there. And for a long period of time, you can get by with that by, in a sense you're rolling, kind of loaded dice because you have such a low volume of traffic, the chance e even though it's kind of dangerous, desi, it's over-engineered for the space.

You can get by with it because of the low volume of traffic and in a sense, like the low instances of potential conflict when a crash like this happens. It is, I mean, and, and this is kind of what the statistics will say too, it's a, it's a random occurrence.

You have someone walking at night, someone driving at night, it takes a moment of inattention, a moment of, of, you know, someone being in the wrong blind spot or the wrong place or, or what have you. For a crash like this to occur, a lot of rural roads are made safe or or deemed safe because crashes like this don't happen, not because they actually are safe, but just because that random occurrence of of, of bad events has not happened there.

You could in theory go many more years now on this road without this happening again because of the volume of people and the volume of traffic. That doesn't mean that all of these things that we've listed, you know, the striping, the no space for people biking and walking, the lighting being an issue, that these aren't issues, but these are gonna be systematic issues. Every time you have a situation like this, every time you have a small rural road that in a sense is

getting a little bit more traffic, a little bit more people biking and walking is in a sense like over-engineered for speed and under engineered for complexity, you're gonna have this kind of thing.

I suspect that we could go all over Durango and find other situations, maybe not to this extent or this intensity, but you're gonna find this because it's a city that used to be very remote, very rural, very low traffic, very low volume where people would walk and bike in the middle of the street and not worry about it. And it's, it's grown up very quickly, very suddenly. And so you have have these conflicts, I think when the city has this road that they've taken over.

There's a and, and this is going back again over the history and I hope kind of instructive for how we think, not just about this, but about other places.

When you take over something like this, there needs to be a decision not just about the road that you're taking over, but about the future development pattern along it.

Obviously the more we increase that development pattern, and if you go up and down Animas drive, you see homes that have been put in, you see the different campgrounds and resort type complexes that are there. This is, you know, a touristy area in a sense.

The more you expand that, the more you're gonna increase the, in a sense, the roll of the dice, the more the odds are gonna be stacked against you in terms of safety. And the less you're going to be able to have the perception of safety because of random chance, the more that random chance is gonna go against you. And so if the city is committed to developing this corridor, then the city has to also be committed to putting the resources into changing the engineering and design of this street so that it doesn't function like a highway, which is how it's designed, but it functions as a city street, which is gonna have very, you know, low, low speeds, lots of friction, not be about convenience of access and convenience of drivers, but really be about something else.

And so to me, the the main, if you said like, what is the cause of this? It's a mismatch between the design of this section, which is a old highway and the types of uses that have grown up around here creating a, a, a, a greater chance for that random negative occurrence to happen.

Thanks Tony. That's all I've got.

Tony Harris: Yeah, thank you Chuck. That's really helpful. The, the mismatch language always, always speaks to me a lot. Any responses or other thoughts on factors from anybody?

Okay, cool. Well in that case I think we can move on to recommendations. So I'd like to invite maybe Anthony to start us off again on any recommendations you might have thought about to improve safety and security for road users in this area.

Anthony Catania: Sure, thank you Tony. So, so I'll start with, with a couple of, call them more shorter term recommendations, which I think is probably the best way to do it. So one of the reasons why I asked about stop signs earlier is because I think there are a lot of, there are a lot of methods that are used to slow traffic, some of which you mentioned earlier, traffic circles and, and speed bumps. I can't remember if that was one of the recommendations, things that slow, slow cars down. And sometimes I think that the solutions can even be simpler than that by introducing stop signs. And the stop signs don't necessarily have to be at intersections where you have a large amount of cross traffic.

They can actually occur at the, you know, the entrance to the campground. They can occur at, for example, the, the trolley stops and be paired with crosswalks in those locations. And the thing that, the thing that's nice about stop signs, especially when they're employed in a, in a kind of a, an an interval along a roadway like this is it actually brings drivers to a complete stop instead of just slowing them down. And if we accept that this roadway is used more so by folks who, who live along this stretch or, or visiting these, these resort type developments or the

campgrounds along this stretch, they start to become familiar with where, with where they're located, that sort of thing.

So I think considering maybe some strategic points for pairing crosswalks with stop signs might be a, a, a short term solution. The, the second, and I won't say too much about it, I think is the, is the lighting issue. And I kind of mentioned before the way in which some of the lighting, at least the way it seemed to me in in the photographs we looked at, was actually causing more of a glare than, than than illuminating the surface of the pavement and anyone who happens to be walking or biking along the edge. So just strategic placement of lighting, especially at curves, at intersections, certainly if any crosswalks or introduced providing a sufficient level of lighting at those crosswalks and making sure that the lighting is installed such that it's lighting the locations where people will be and it's shining down on them and not out at you as a driver and creating glare.

I think there's a lot of lighting that's been installed with great intentions, but there wasn't a kind of level of thought of what you're illuminating and how it's actually making things safer. It's just kind of checking certain boxes about how many foot candles or lumens and, and sometimes requires a little bit of, of further thought. So stop signs bringing drivers to a stop at, at intervals and improving lighting or the first two, the kind of moving into the mid and, and, and oh here, here's a, here's an image of a stop sign here. Of course not a great crosswalk in this location, but this brings me to, to the, my mid and longer term recommendations here.

When, when I first started looking at the roadway here, where the crash occurred, it reminded me of a not so rural but somewhat similarly designed thoroughfare in Maryland just outside of Washington DC where I lived for, for a number of years. And so this was a roadway that was striped in a similar way to Animas View drive with the double yellow center line, the, the the solid white edge lane striping. And although this road had a kind of a, a zone or a shoulder for pedestrians or bikers already off to one side, there was still, there still wasn't a degree of separation between the traffic and pedestrians.

And there were also still sections where you had to kind of, kind of walk out into traffic to get around other obstacles. And one of the really interesting and very relatively simple and easy interventions that they introduced along this road was they brought in basically these just wood railroad ties and used them as a, as a divider from the tra the, the travel lane to the walking and biking lane, which in this case is generally around three to four feet in width. And so, and you could see somebody jogging right here and when you actually, when you're actually walking along this road, even though we're not talking about a guardrail or a jersey barrier, traffic is moving slowly.

There are an interval stop signs along this road that keeps people moving slowly and stopping frequently that you actually feel reasonably comfortable walking, running or biking along a thoroughfare even though it's striped in this way.

In the same way that Animas View drive is today.

You could see another image of that here.

So I think my recommendation might be looking at looking at the width of pavement that you have along Animas View drive. And so right here it looks like we have an average of around 22 feet in pavement width, right? We have 10 foot travel lanes, one foot shoulders that it looks like in some cases actually are a little bit less, in some cases are a little bit wider of a shoulder. So one thing you might consider on a, on a thoroughfare where the target speed is 25 miles an hour or potentially less than that is maybe you go to nine foot lanes and you actually give yourself two more feet on one side of the road.

In this case probably the east side where all the connections are to, to properties and driveways and the the other things along, along the drive maybe you give yourself, you know, a, a total of three in some cases, maybe even four feet over there and use a similar strategy where you're

kind of creating a zone that is separated in a light, lightly visual way with this kind of railroad tie separation here and giving you more of a protected zone to, to walk and, and to bike. And the other thing that this, this does from an engineering standpoint, that if you kind of zoom in a little bit, it's a little bit difficult to see, but the railroad ties are actually raised up and they allow the drainage to kind of run underneath.

And so you're not, you're also not changing the drainage patterns of the existing pavement and it can be a, a relatively simple intervention that really entails retrip and laying down this separation and the walking and biking zone kind of happens on the same, the same pavement that you already have out there.

The, the second option that I'll recommend is what's called an edge lane road. And you also mentioned earlier advisory shoulders and these kind of red stained or striped zones are, are also what you might call an advisory shoulder. So this is a, this is a thoroughfare type that's been used in Europe and particularly the Netherlands for many, many years.

Not so much in America, but I think that's starting to starting to change. There are a few places that are experimenting with this, this thoroughfare type and the way that this works, which sounds crazy to folks at first, but what you have is you essentially have a center lane that's 10 to 12 feet wide that actually handles two-way traffic. And when you have a thoroughfare that's let's say less than a thousand vehicles per day, which in the grand scheme of things is a very low traffic volume, you essentially two-way traffic shares this, this center lane and you have five foot shoulders on either side where biking and, and walking and running and those things occur and then the vehicles kind of are allowed to, to merge over into those advisory shoulders or those edge lanes when another vehicles is oncoming to pass each other.

And then you kind of slowly move back into that center lane. And although vehicles do occasionally coexist with pedestrians and bikers in that advisory lane, when the traffic count is so low, it makes those kind of random events of collisions that Chuck was talking about even

much more rare. And this kind of arrangement of the lanes in places that have been studied does actually reduce the occurrence of collisions with pedestrians and bikers. And it also very much tends to keep the speeds of drivers slow because they don't have that sense that they're in a lane all of their own without the possibility of, of obstacles.

And so it keeps you driving at a, at a slower speed and and much more likely to see the obstacle of, of a pedestrian or a biker in that lane.

This is actually an example, it was a very, very simple way that they instituted this, this this edge lane road or advisory shoulder type of thoroughfare. And this is in Colorado, this is in Vail, so you do have already one in your state. And they went through, from what I read at least, you know, a very extensive process of studying, studying the, the implementation of this on this particular thoroughfare outside of Vail and how it was gonna be really the optimum solution that they could institute very quickly to provide a a, a more protected zone for for bikers. And you can see that just where I happen to drop myself down on street, you, you can see bikers using, using this thoroughfare.

So I think e either a combination or a a, the idea of going one way or the other of providing that protected zone on one side or instituting a thoroughfare type like this might be some of my mid or longer term term recommendations here.

Tony Harris: Thank you Anthony, that's really helpful to see laid out the way that you did with the visuals. I appreciate that. Great. Rich, maybe we can come to you next on recommendations if, if you have anything you'd like to add.

Rich Fletcher: I think it's a great idea to have a, I mean to, I just spent four months in Europe and the kind of street situation that Anthony was talking about or was it Chuck? I'm sorry, I don't remember at any rate the, that's not unusual over there. Also circular intersections are not unusual.

They're new to Durango and I can't tell you the number of times I have approached a circular intersection only to find several people confused as to what's going on.

So I am, I am a little concerned about two cars in, in my local culture coming toward each other without a huge advisor as to this is how the game is played here.

Also, the, the railroad ties, having Durango and Silverton narrow gauge railroad here gives us an abundance of such ties. However, in winter when the snow plows are plowing all the way to the edge and over the edge of the roads, I don't think those would last very long.

So those are my only thoughts.

Tony Harris: Got it. Thank you Rich. Nancy, any thoughts or recommendations from you?

Nancy Dosdall: Wow, it's a tough job to go at this after all the experts that have weighed in. Yeah, I, I, you know, I, I can't say I, I I think I agreed with almost all of them. I was, I'm still a little leery on the advisory shoulders, just but whatever. I think what we need to focus in on is disco, slowing down the traffic, discouraging any through traffic that might be there.

I guess the one thing I haven't heard that I think would be great would be to extend our river trail behind all the development further up north along the railroad tracks. If we could get the railroad to cooperate, that would really get people off if, if there were ways for them to access across. So absolutely more crosswalks, anything to add interest and activity to slow those cars down. And then some of the, either if it's advisory shoulders or the one way just to slow that traffic down and discourage 'em from using it instead of just staying on the highway. If they're, if they wanna go fast, there's the highway, what are they doing on analyst drive, you know, unless they're going,

Tony Harris: Yeah, yeah. Thank you Chuck, anything from you on recommendations?

Chuck Marohn: Yeah, I've got a, I've got a couple things. First, let me just say, I think Anthony's spot on, like literally like every recommendation that I wrote down, he talked about thoroughly, and I'm won't go over them all again except maybe I will just reiterate, you know, you Anthony, you call them edge lane roads, that's a new term.

Advisory shoulders was a new term for me too. We always call them yield streets. And this idea of a yield street is really scary to a lot of people.

But the reality is, is like from a design standpoint, it's actually very genius because you are communicating to the driver through the placement of the shoulders and the striping and everything that they have to be on alert. And what that does is it slows people down and it makes any, it it, it reduces collisions A and b it makes any collision that does happen at a much lower amount of kinetic force. And so it really does a lot to improve safety on a rural area like this. That would be, especially when we're taking into consideration budgets. I know some of the, some of the recommendations that I saw in the tool report and some of the things that I saw being discussed from the city standpoint were very, very intense from an engineering standpoint and a design and construction standpoint really, really, really expensive.

And for 500 trips a day, that kind of mindset won't scale to the other parts of the city that need similar kinds of treatment and similar kinds of attention.

So let me add, the only other recommendation that I had is that I, I think that we might want to consider, and I wouldn't make this an immediate thing, but a long-term thing that's, we might wanna consider some type of connection from Animas back out to main avenue back out to the highway here. If we go up to the north end, you can see that there's a full intersection here, full crossing when you come, you can go north, you can go south, you can go either direction. If you find yourself on Animas then you, oh, that it was right here. I'm sorry if you find yourself un

Animas, part of the problem is that with the highway geometry, people will get partial way down here and then they just kind of commit to going the full length and you wind up kind of impatient because why am I stuck here?

I, you know, I really just want to get back out on the road and you wind up having to come all the way back down to this full intersection down here, this particular place. I think that if they did just a right in, right out, I know that the, the DOT is probably going to resist the idea of another full intersection, especially with no development here. I'm assuming this is some kind of government land or, or something in reserve that is not being developed. 'cause you can see a large stretch of there that's not and not going to be

Nancy Dosdall: It's a cliff. Yeah, yeah.

Chuck Marohn: Oh, it's a cliff. So it's, it's not going to be developed. So I, my guess is that they're not gonna say, well, yeah, we'll put a signal in here and all that, but you certainly could in this spot here have an intersection where you could at least go right in right out and cut that big length in half. What that would do is it would get some of, at very low cost, get some of the traffic that would normally find itself speeding along Animas back out onto the highway where those speeds are actually safe and engineered in and, and could be done more safely in that little spot where it's very close.

That would not be a huge expense, but it would be something that would, you know, marginally decrease and keep us below that even with some growth. Keep us below that a thousand car a day where the yield street, the, the edge lane road as, as Anthony calls it, would be a really good option. The, the only other thing that I'm gonna say in terms of recommendations, I know there's a lot of talk about, 'cause I saw it in the news reports and I saw it in in in other things that were put together here about traffic enforcement and about the idea that even doing like automated camera enforcement and that kind of thing, not only do I think that that would be not very effective in, in, in general in a situation like this, I think that the high percentage of

what I'm just gonna say is touristy visitors, people who are not native to the place would actually make it even less effective.

Cameras tend to work best in places where people kind of know they're there and adjust their behavior accordingly.

The the, the geometry of this roadway and the design of this roadway, as you can see with the speed data suggests to drivers that they can drive at at high speeds. Even if you have a little sign that says otherwise, people leaving those resorts, people leaving those campgrounds, some of them will have that imprinted in their mind, but most of them that will not because driving is not, is, it's something we do with a passive part of our brain and it's very easy to see them, you know, in a sense getting a lot of tickets but not actually getting a lot of compliance. And I think that there's a mismatch between the types of drivers you see here and the idea of enforcement being a, a long-term solution.

So having more police patrol out there and be more visible. Sure, but usually enforcement cameras don't even kick in until you get to 10 miles over the speed limit, which in this case would be 35, which itself is way, way, way beyond a lethal speed. And so I just, I think relying on that as a solution or putting that in and then waiting five years or 10 years before we take the next step, I think would be a, a real tragedy. I, I think that would be like the wrong way to go.

That's all I got, Tony.

Tony Harris: Great. Thank you. That's some helpful commentary, particularly on the speed cameras. Any, anything else on recommendations from any of our panelists?

Okay, well in that case I am happy to shift us to a brief closing. I'm gonna pull my PowerPoint back up for a moment if that's all right.

So I would like to offer some acknowledgements and special thanks to people who have made this session possible today.

So I wanna say thank you to our panelists of course. So Nancy, rich Anthony, Chuck, we really appreciate you all taking the time to be here with us today. A big thank you to our nominator, Andrew Allport and city staff, Durango community members who helped with information gathering and getting us prepared for our session today. I'd like to say thank you to our sponsor for this event, an anonymous donor and a big thank you to Strong Town staff who helped me prepare. You can find a recording of this session and all of our crash analysis studio sessions by going to strong towns.org/crash-studio. And our next virtual studio session will take place on July 19th.

And you can find more information about that on our website too.

Also available on our site are links to our free academy course for establishing a crash analysis studio in your own community. And if you're interested in having strong town staff, visit your community to co-host an in-person studio or give a transportation presentation presentation or any other type of event. You can fill out an inquiry form through our website as well. So on behalf of my colleagues and the assembled panel, I wanna thank you for watching this session of the Crash Analysis Studio and keep doing what you can to build a strong town. Take care.