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INSIDE THIS EDITION

inciter
Cortney Falero
Newsletter Editor

The Safe System Approach—What is it & Why should I care?

Olivia Polinsky, EIT | HDR

In each issue, the INCITER features an article coordinated by one of NCITE's technical committees. This article is a contribution from the **Complete Streets & Safety Committee.**

Why is a new approach necessary?

Minnesota established itself as an early leader in traffic safety efforts in the U.S. when the Minnesota Toward Zero Death (TZD) program was launched in 2003. Statewide efforts pushed by MN TZD led to dramatic reductions in traffic fatalities, from 625 in 2003 to 364 in 2019 (42% reduction)[1]. However, around 2010, the improvements hit a plateau and early in the COVID-19 pandemic, traffic fatalities spiked to 488 in 2021, despite statewide reduction in vehicle-miles-travelled (VMT) and vehicle exposure. This trend was not unique to Minnesota and was seen nationwide. As a result, it became clear that a new approach to traffic safety was necessary to reach a vision of zero traffic fatalities on U.S. roads.

As the need for a new approach was identified, FHWA unveiled the Safe System Approach (SSA) as the federally endorsed approach to meet Vision Zero[2].

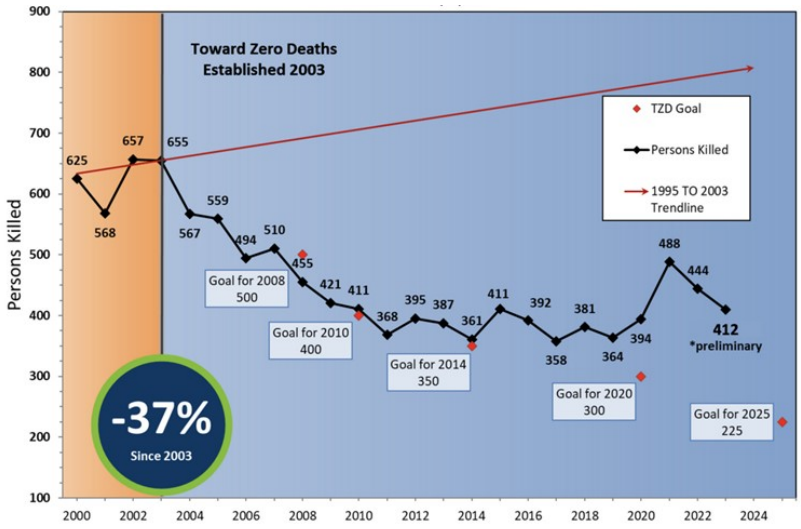

Figure 1: Minnesota Traffic Fatalities (Source: Minnesota TZD & MnDOT)

[1]MN TZD (https://www.minnesotatzd.org/sites/minnesotatzd.org/files/2024-02/overview_2024.pdf)

[2]FHWA Zero Deaths and Safe System (https://highways.dot.gov/safety/zero-deaths)

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JOB OPENINGS

Visit the NCITE website for current job openings | nc-ite.org

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PRESIDENT'S MESSAGE

Phil Kulis
2024 NCITE President

Hello everyone! I hope everyone has been enjoying the early spring and has been able to get outside and enjoy the weather. We hope you've also been able to take advantage of the Section Meetings, including the February one on the Highway 10/169 Improvement project, the March one on MnDOT's pilot Highway 252/I-94 Equity and Health Assessment (EHA), and the recent April one on safety evaluations from MnDOT's Office of Traffic Engineering. These have been great presentations, and we appreciate the speakers for presenting, our meeting advertisers, and all the attendees for coming out.

NCITE has also been actively planning exciting events through the summer, which include:

- **MN Ethics Training (May 2):** NCITE has partnered with WTS to offer a joint training that satisfies the ethics continuing education requirements both PE and AICP certifications. There are virtual and in-person registration options available.
- **May Section Meeting (May 14):** NCITE has partnered with the Wisconsin ITE Section to host a joint meeting, which includes a presentation on the Blatnik Bridge between Duluth and Superior, along with providing a networking opportunity to meet members from our neighboring Wisconsin ITE Section.
- **Summer Social (July 25):** Last year's summer social with MSES, WTS, ITS MN, and NCITE was such a hit that we're teaming up again for a Saint Paul Saints game in July!
- **Golf Outing (August 1):** NCITE is planning for its first golf outing later this summer, which will be a 9-hole event to fundraise for our student scholarships. The event will be at Cedarholm golf course adjacent to MnDOT's Waters Edge. Additional information will be coming out soon, but you can start thinking about your team now!

In addition to NCITE events, there are District and International events upcoming:

Great Lakes District and WTS Central Region 2024 Annual Meeting (June 12-14): The Great Lakes District is having its annual meeting in Green Bay, Wisconsin, and is teamed with the WTS Central Region for the event. There will be great technical presentations, along with the Traffic Bowl and an opportunity to tour Lambeau Field. Registration is open and can be accessed here: https://www.eventbrite.com/e/annual-meeting-2024-registration-767893298527.

Joint ITE International and Mid-Colonial District (July 21-24): The Annual ITE International meeting is taking place in the historic city of Philadelphia, Pennsylvania. Registration is currently open, and the early bird deadline is June 7, 2024.

The NCITE technical committees have meetings underway, so please consider attending to further meet professionals across the organization and learn about projects occurring across the Section. A full list of the committees can be accessed here: https://nc-ite.org/Committee_Listing. You can review the committee descriptions and sign up for committee email lists here.

NCITE has a lot to offer its members and we encourage everyone to get involved in the capacity that fits them best. If you'd like to become more involved with NCITE, please reach out to myself or any other board member. Committees are a great way to get involved - we are currently looking for a co-chair for our Complete Streets and Safety Committee. We're also looking for an advertising coordinator, which is another opportunity to get involved.

Thank you all for making NCITE a great section and we hope to see you at upcoming events!

Phil Kulis, *2024 NCITE President*

UPCOMING EVENTS

ite Calendar

ITE Calendar for District, Section, & Chapter Meetings
Stay Connected with NCITE & ITE Events
Online & In Person | Dates Vary

ncite

NCITE Calendar
Online & In Person | Dates Vary

GREAT LAKES DISTRICT ite

GLITE Annual Meeting
Green Bay, WI | June 12-14, 2024

Attend an Upcoming NCITE Technical Committee Meeting!
Check out upcoming topics here.
For more information on the committees and how you can get involved:
https://nc-ite.org/Committee_Listing

For professional development opportunities:
http://nc-ite.org/content.php?page=Professional_Development_Meetings

SECTION MEETING UPDATE

The February Section Meeting was held on February 2nd, 2024 at Jax Café in Minneapolis, MN. **Ben Nelson**, **Eric Johnson**, and **Kelsey Larsen** presented on the **Highway 10/169 Improvement** project.

The March Section Meeting was held on March 12th, 2024 at MnDOT Waters Edge in Roseville, MN. Presentation topic was the **MnDOT's pilot Highway 252/I-94 Equity and Health Assessment (EHA).**

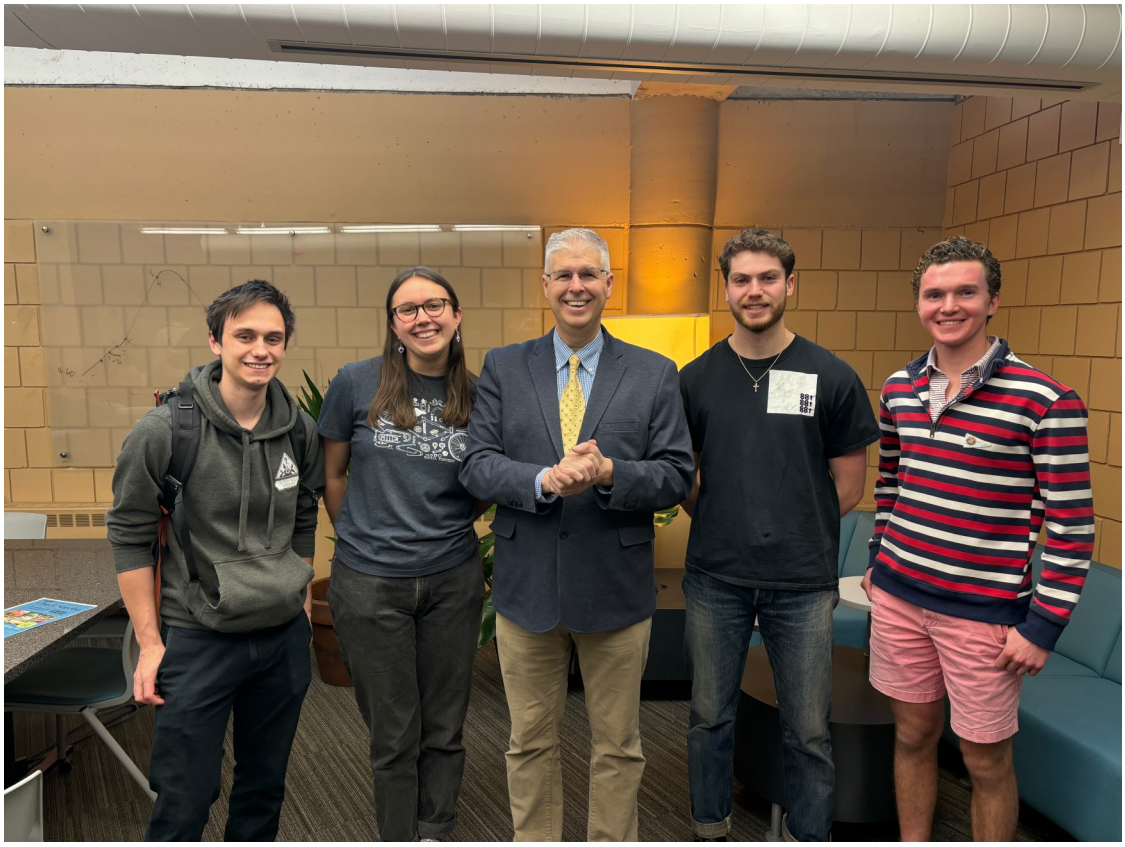
YMC UPDATE

In February, the NCITE Younger Member Committee filled three bays at Top Golf. Various games were played including, the classic Top Golf and Angry Birds, however, the most competitive game was Jewel Jam! Look out for more events this summer!

If you are not receiving the YMC StarChapter emails, please reach out to one of the YMC's 2024 Co-Chairs:
Bryce Statz at Bryce.Statz@kimley-horn.com | Olivia Polinksy at Olivia.Polinsky@hdrinc.com
If you or a co-worker are interested in joining the Younger Member Committee please visit the YMC Page on the NCITE Website here.

STUDENT CHAPTER UPDATE - UMN-TC

University of Minnesota—Twin Cities Student Chapter have continued the monthly "TranspoTalks" presentations with special guest **Chuck Marohn** from **Strong Towns** who presented on why the conventional approach to traffic engineering is making people less safe and how it's impacting our cities' budgets. They also heard from a local civil engineering firm that made ADA improvements to a road in Minneapolis. They have had a great year and are excited to what they will learn during presentations next fall."



If you would like to get involved with any of the NCITE student groups to present or learn about upcoming job fairs—reach out to the Student Activities and Career Guidance Committee co-chairs: **Ann Stewart** at ann.stewart@state.mn.us | Chad Jorgenson at cjorgenson@sehinc.com

The Safety System Approach—What is it and Why should I care? (continued from page 1)

Though newer in implementation in the U.S., the SSA has had great success internationally, with Sweden and Australia being recognized as early adopters and success stories.

What is the SSA?

The SSA is a holistic and comprehensive approach to traffic safety that works to establish multiple layers of protection that first, minimize the risk of crashes occurring and second, minimize the severity of crashes when they do occur. The SSA is most often summarized by the SSA wheel:

Safe System Approach Wheel (Source: U.S. Department of Transportation)

There are six principles that make up the foundation of the SSA:

1. **Death and serious injuries are unacceptable.** The SSA aims to eliminate all traffic fatalities and serious injuries. FHWA states that "Zero is our goal. A Safe System is how we will get there."
2. **Humans make mistakes.** No one is perfect and every road user makes mistakes. It is imperative that our roadways are designed to accommodate human errors so when a person makes a mistake and a crash occurs, it does not result in a death or serious injury.
3. **Humans are vulnerable.** There are physical limits for how much force humans can tolerate before death or serious injury. The transportation system must be designed to reduce the kinetic energy transferred when a crash occurs to accommodate human vulnerabilities.
4. **Responsibility is shared.** In order to eliminate fatalities and serious injuries, everyone must do their part. Stakeholders may include transportation professionals (planners, engineers, researchers), law enforcement and emergency medical services, vehicle manufacturers, and the general public.
5. **Safety is proactive.** Rather than waiting for a crash to occur and reacting to address safety issues at that location, proactive tools must be used to identify and mitigate safety issues throughout the transportation system before a crash occurs.
6. **Redundancy is crucial.** All components of the transportation system need to be considered and improved so that if one part fails, there are other layers of protection still in place to prevent the crash or minimize the harm inflicted.

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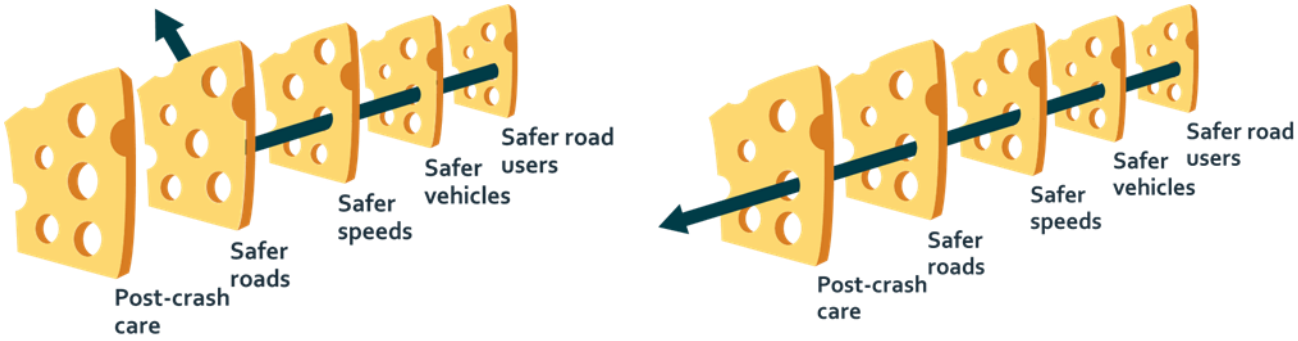
The Safety System Approach—What is it and Why should I care? (continued from page 8)

The SSA has five complimentary elements that holistically encompass the six core principles. The five principles emphasize the need to accommodate human error and vulnerabilities to eliminate fatal and serious injury crashes, share responsibility among stakeholders, and utilize proactive and redundant safety solutions. The five SSA elements include:

1. **Safer Road Users –** Encourage safe & responsible behavior of all road users (people who walk, bike, drive, roll, ride transit, etc.) and provide transportation facilities that protect all road users.
2. **Safer Roads –** Design roadways that encourage safe behavior of road users and accommodate human mistakes and vulnerabilities.
3. **Safer Speeds –** Speed management helps accommodate human vulnerabilities by reducing impact forces, providing additional time for drivers to react and stop, and improving visibility.
4. **Safer Vehicles –** Design vehicles that minimize the likelihood and severity of crashes, utilizing the most up-to-date vehicle safety technology.
5. **Post-Crash Care –** When someone is seriously injured in a crash, it is crucial that first responders can quickly locate the injured person, stabilize their injuries, and safely transport them to medical facilities. Post-crash care also includes Traffic Incident Management (TIM) efforts, to create a safe working environment for responders and prevent secondary crashes.

To demonstrate how the five elements work together to provide redundancy in the transportation system, a "Swiss Cheese Model" is often used. In this analogy, each of the elements are represented as a slice of swiss cheese, and the weaknesses or failures in that element are represented by the holes in the cheese. Only when all five layers fail, is there a resulting death or serious injury.



Safe System Approach "Swiss Cheese Model" (Source: FHWA SSA Presentation)

This concept can be further explained with an example. Consider a situation where an attentive driver is approaching a pedestrian crossing a major street in the evening. In scenario A, there are no pedestrian crossing facilities or streetlights, the speed limit is 45 mph, and the pedestrian is wearing all black – the driver does not see the crossing pedestrian in time and the resulting crash leads to a serious injury. Now consider scenario B, where there is an RRFB and streetlights present, the speed limit is 30 mph, and the pedestrian is wearing reflective gear. In this scenario, due to the redundancy of the SSA elements, the driver is able to see the pedestrian, safely stop in time, and there is no resulting crash.

So… why should I care?

FHWA's adoption of the SSA demonstrates that safety can no longer be an afterthought in transportation planning and design, but rather a priority at every phase of project delivery. As you deliver projects, ask yourself – is there anything else we can do to reduce speeds or separate conflicts in time or space? If you're not sure where to begin, FHWA's recently published Safe System Road Design Hierarchy is an excellent resource to spark ideas on how to better align your projects with the SSA.

We all play a role in making our roads safer. As transportation professionals, it is our moral and ethical responsibility to deliver projects with safety at the forefront – and it is the only way we will meet our target of zero.

Dale Street Redesign Project: Reducing Lanes While Maximizing Parking

Scott Poska, PE, PTOE, RSP1 | Alliant Engineering

In each issue, the INCITER features articles coordinated by NCITE's advertisers.
This article is a contribution from **Alliant Engineering.**

Alliant, with team partners Zan Associates and AET, is working with Ramsey County and the City of St. Paul on the Dale Street Redesign Project. The HSIP and CMAQ funded project includes a mill and overlay and 4 to 3 lane reduction along Dale Street from Iglehart Avenue to Grand Avenue, upgrade or replacement of six traffic signals, and pedestrian safety improvements. Figure 1 shows the project area and identifies the key study intersections.

The Dale Street Iglehart Avenue to Grand Avenue segment is 0.65-miles and is a 30mph four-lane 40-foot-wide undivided roadway. This segment ranges in AADT from 7,900 on the south end (near Grand Avenue) to 17,900 on the north end (near the I-94 ramps). New intersection turning movement counts including vehicles, pedestrians, and bicyclists were collected in the fall of 2023. Most of the intersections along the corridor are controlled by through/stop, with Marshall Avenue, Selby Avenue, Summit Avenue, and Grand Avenue being signalized.

On-street parking is provided along much of the study segment. A parking study was conducted along the corridor in the fall 2023. Results of this study show that during the majority of the observed time periods, parking utilization is highest between Selby Avenue and Grand Avenue on both sides of Dale Street with utilization often being high (75% to 100% utilization) and at times exceeding 100%. Parking utilization north of Selby Avenue is consistently low (0 to 50% utilization).

A safety analysis revealed a total of 38 intersection crashes reported along the Dale Street corridor in a five-year analysis period. Six pedestrian crashes occurred at five intersections within this same period. One pedestrian crash occurred at each of the Dale Street intersections with Dayton Avenue, Selby Avenue, Ashland Avenue, and Grand Avenue, with two pedestrian crashes occurring at Summit Avenue. Of the six pedestrian crashes, one resulted in serious injury, three resulted in minor injuries, one resulted in possible injury, and one resulted in property damage only.

The project team began the first of three phases of public engagement for the project in the fall of 2023. The goals of engagement phase one were to 1) inform stakeholders about the project, 2) collect feedback on project priorities and user opportunities/challenges on Dale Street, and 3) obtain input on a potential 4 to 3 lane conversion.

The community was overwhelmingly in favor of a lane reduction along Dale Street and voiced the importance of added pedestrian accommodations and safety improvements to the project.

Figure 1: Project Location

(Continued on page 11)

Dale Street Redesign Project: Reducing Lanes While Maximizing Parking (continued from page 10)

The results of the phase one engagement are shown in Figure 2.

Figure 2: Phase One Engagement Summary

Following the first phase of engagement, the team used an iterative process to develop several typical cross-sections along Dale Street with the goal of improving user safety while limiting negative impacts to existing operations. Like most corridors, the project area contains two distinct conditions: Iglehart Avenue to Summit Avenue has low parking demand while Summit to Grand Avenue utilizes nearly all available parking (Figure 3).

Figure 3: Existing Parking Demand

To address these differences, the team divided Dale Street into two subsegments; Iglehart Avenue to Summit Avenue and Summit Avenue to Grand Avenue, and developed a concept for each (Figure 4). Corridor Concept A retains the existing lane configuration south of Summit Avenue and modifies Dale Street north of Summit Avenue to be a three-lane cross section with TWCLTL. The segment south of Summit Avenue would operate similarly to a three-lane roadway with short left-turn lanes provided at Summit Avenue and Grand Avenue. Corridor Concept B modifies all of Dale Street to be a three-lane cross section with TWCLTL and a dedicated parking lane on the east side of Dale Street.

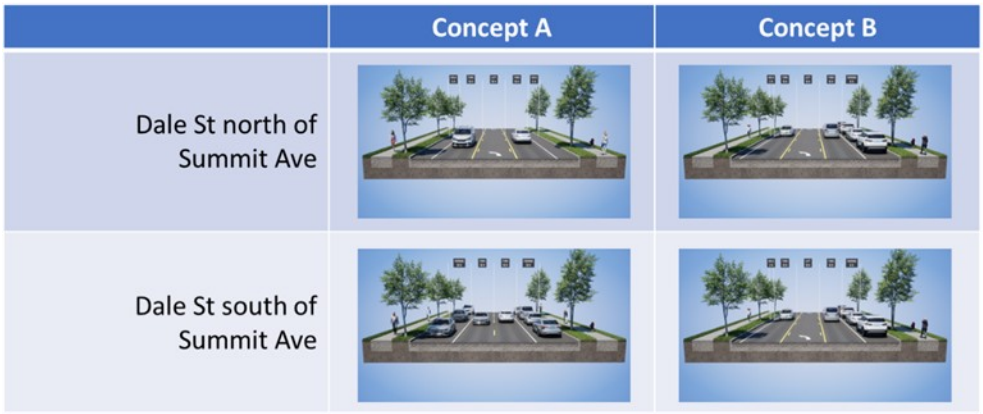


Figure 4: Dale Street Concepts A & B

(Continued on page 12)

Dale Street Redesign Project: Reducing Lanes While Maximizing Parking (continued from page 11)

The second phase of engagement occurred in February 2024 with the goal of collecting feedback on the design concepts. The results of this phase of engagement are shown in Figure 5. The community was in favor of both concepts but voiced a preference for a blend of the two concepts to maximize the amount of on-street parking provided.

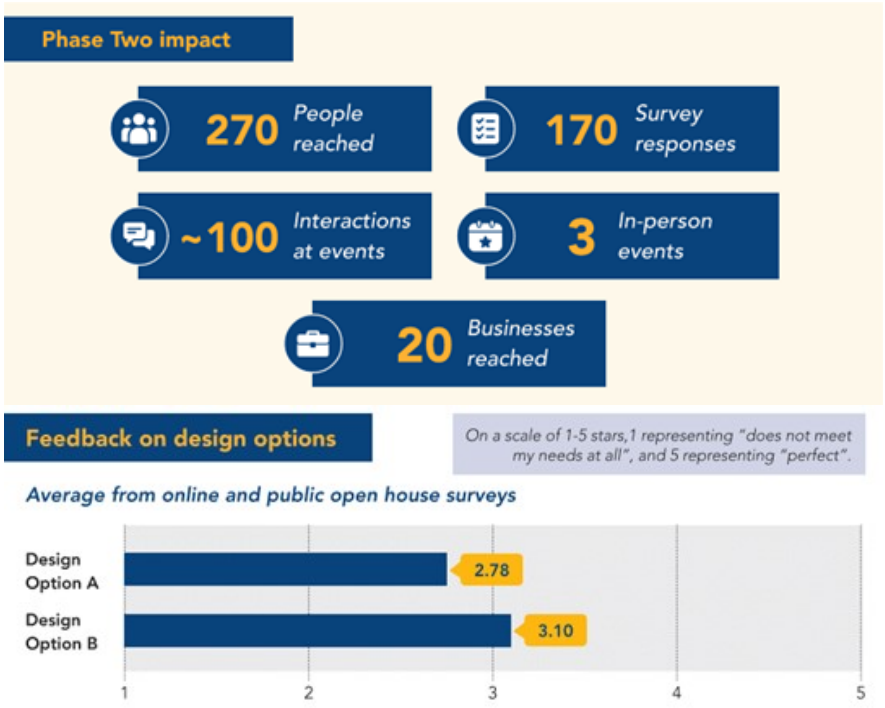


Figure 5: Phase Two Engagement Summary

Concept C resulted from the second phase of engagement. Shown in Figure 6, this concept includes retaining the existing lane configuration south of Summit Avenue and modifying Dale Street north of Summit Avenue to be a three-lane cross section with TWCLTL and a dedicated parking lane on the east side of Dale Street. This concept achieves the on-street parking conditions desired by the public and is the preferred design concept amongst project stakeholders.

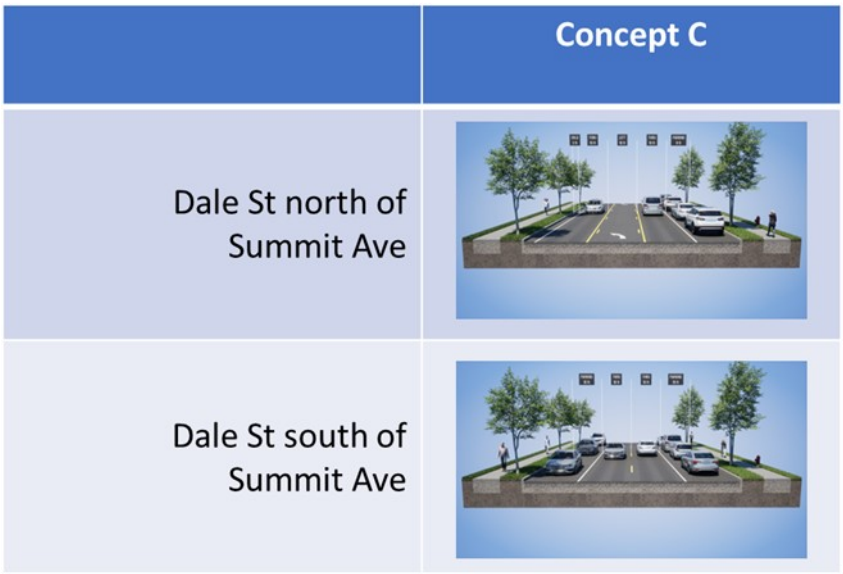


Figure 6: Dale Street Concept C

The project is starting the final design phase in the spring 2024 and is planned for construction in the spring of 2025. The final phase of engagement is planned for summer 2024 to inform the community about the selected design and estimated construction impacts.

More information can be found at: https://www.ramseycounty.us/residents/roads-transportation/future-road-projects/future-road-construction-projects/dale-street-redesign

TH 169 and CSAH 4 Preliminary and Final Design Project, Sherburne County, MN

Kelsey Larsen , PE, PTOE | Bolton & Menk

In each issue, the INCITER features articles coordinated by NCITE's advertisers.
This article is a contribution from **Bolton & Menk.**

The TH 169 and CSAH 4 Preliminary and Final Design project analyzed and designed a new grade separated interchange in the City of Zimmerman within Sherburne County. The existing at grade signalized intersection of TH 169 at CSAH 4 has significant safety and operational concerns.

Figure 1: Existing Conditions

TH 169 is a principal arterial serving 33,800 vehicles per day (2,200 HCADT). CSAH 4 is a minor arterial roadway serving 16,700 vehicles per day. Mobility is greatly underserved, especially during seasonal peaks when queues extend a mile in length along TH 169 and three quarters of a mile along CSAH 4. Many travelers find alternate routes to avoid congestion on TH 169, putting unnecessary demand on the adjacent north-south corridors. Growth projections for 2045 anticipate 51,000 vehicles will pass through this intersection every day. Travel reliability will be greatly compromised without improvements. The TH 169 and CSAH 4 intersection and intersecting corridors will become gridlocked with backups ranging from two to nearly four miles, resulting in thousands of trips rerouting onto the adjacent system.

This intersection is also one of the most dangerous in Minnesota with 101 crashes between the years of 2015 and 2019. The intersection crash rate is more than four times higher than the statewide average and the fatal and serious injury crash rate is six times higher than the state average. The most frequent crash type is rear ends (77 of the 101 total crashes) demonstrating the signal and resulting backups are the primary contributor to the safety issues at the intersection.

TH 169 provides a critical link between the Twin Cities Metro Area and Central Minnesota, serving residents, businesses, commuters, and tourists. Following the completion of the Elk River 169 Redefine, CSAH 4 will be the only remaining signal on Highway 169 between Highway 10 in Elk River to Onamia.
This project considered several interchange alternatives, going back to a preferred concept from a study completed in 2007, alternatives that rose or lowered CSAH 4, alternatives that lowered TH 169, and an in-depth review of three interchange designs that kept CSAH 4 at grade with TH 169 going over it. The City of Zimmerman expressed a desire to minimize property impacts while maintaining access to TH 169. All alternatives except those keeping CSAH 4 at grade with TH 169 going over it were dismissed due to the significant property impacts these concepts would have.

(Continued on page 14)

TH 169 and CSAH 4 Preliminary and Final Design Project, Sherburne County, MN (continued from page 13)

The three interchange alternatives that were analyzed in-depth include a tight diamond interchange option with roundabouts, a single point urban interchange, and a combination of a diamond and partial cloverleaf interchange. All three options were found to significantly reduce crashes, traffic backups and delays, and improve pedestrian and bicycle facilities with safer connections. Ultimately the tight diamond interchange option with roundabouts was found to be the preferred option as it has the lowest amount of wetlands impacted, lowest amount of right of way impacts, and the lowest estimated construction cost. The existing condition of the intersection is shown in Figure 1 and a rendering of the preferred alternative is shown in Figure 2.

Figure 2: Preferred Alternative

Access management was also considered with the proposed interchange. All intersections along TH 169 within a half mile of the ramp merge points will be closed. The proposed design also converts the intersections of Main Street at CSAH 4 and 3rd Street at CSAH 4 to right-in/right-out and installs a roundabout at 2nd Street and CSAH 4 to improve operations and accommodate the restricted movements. The proposed design also ties the intersection of Fremont Drive into the east interchange ramp terminal to create a five-legged roundabout while eliminating the existing T-intersection, which would have been within 700 feet of the interchange. The project is currently finishing up the final design phase with construction anticipated to start spring of 2025.

Research behind the MnDOT Guide for Establishing School Zone Speed Limits

Chelsea Moore-Ritchie, AICP | SEH
Heather Kienitz, PE | SEH
Erin Jordan, PE | SEH

In each issue, the INCITER features articles coordinated by NCITE's advertisers.
This article is a contribution from **SEH.**

The *Guide for Establishing School Zone Speed Limits*, updated in 2023 by MnDOT, incorporates the latest research and best practices in traffic safety, focusing on Safe Routes to School and the Safe System Approach. The revision process, led by the Office of Traffic Engineering, included two main stages:

- Review and feedback opportunities from technical experts and agency stakeholders including practical considerations through a Project Advisory Committee made up of MnDOT staff across offices and County and City traffic engineers.
- Completion of a Transportation Research Synthesis (TRS) to ensure that any new guidance developed was based on research with a high level of methodological rigor including oversight from an internal MnDOT Technical Advisory Committee.

This article will highlight key research findings behind the new guide.

Resources
The TRS reviewed laws and policies across the United States and publications from the National Highway Cooperative Research Program (NCHRP), Transportation Research Board (TRB), Institute of Transportation Engineers (ITE), Safe Routes to School (SRTS) National Partnership, and National Center for Safe Routes to School.

State Statutes and Policies
Minnesota law allows local authorities to establish a school zone speed limit (SZSL) between 15 mph and up to the approaching roadway speed limit (but no greater than 30 mph below the approach speed limit), leaving a wide range of SZSLs from which local authorities may select. Across the US, 36 states define a SZSL by statute, ranging from 15 to 25 mph. Many states allow jurisdictions to lower SZSLs further based on an engineering and traffic study.

Speed Reduction
Nine US and international studies evaluated SZSLs before and after implementation. Findings showed that SZSLs largely result in reductions in mean and 85th percentile speeds without increases in motorist speeds. The most scientifically robust study evaluated 43 school zones in Edmonton, Canada (Sun et al., 2018, Canadian Journal of Civil Engineering). SZSLs were introduced without other significant changes, lowering limits from 50 km/h (31 mph) to 30 km/h (19 mph). Results showed a 12.2 km/h (7.5 mph) reduction in mean and a 11.6 km/h (7.2 mph) reduction in 85th percentile speeds through school zones. The study also found a shift to the left of the cumulative speed distributions and a decrease in speed variance, which typically implies an improvement in traffic safety.

(Continued on page 16)

Research behind the MoDOT Guide for Establishing School Zone Speed Limits (continued from page 15)

Crash Reduction

In the past two decades, four applicable studies in Canada, Europe, and Australia have evaluated the effect of SZSLs and 20 mph residential speed zones on safety by analyzing multi-year crash histories. Two studies evaluated residential speed zones and two specifically reviewed school zones. All found reductions in the overall crash rates, the fatal and severe crash rates, and the crash rates for vulnerable roadway users, indicating safety improvement with SZSLs and/or residential speed zones. Gaps were noted in US research on the effects of SZSLs on both safety and higher speed roadways (40 mph or greater).

Additional countermeasures such as flashing beacons and other design solutions further increase compliance of reduced speeds in school zones during school arrival and dismissal. This is an example of a Flashing System and School Zone Speed Limit at Coon Rapids High School.

Speed Differential and Buffer Zones

The impact of speed differential on compliance was highlighted in multiple studies citing the importance of a lower speed differential for SZSL compliance. The recommended speed differential ranged from 5-10 mph while differentials greater than 15 mph were discouraged (Fitzpatrick et al. 2009, NE DOT 2020, 1990, Saibel et al. 1999). Buffer zones, which step down speeds, were also recommended for higher speed roadways.

Redundancy is Key

SZSLs should be considered just one of many steps to improve the safety of students, families, and staff walking, biking, and rolling to school. The layering of additional countermeasures as applicable, such as flashing beacons and geometric changes to the roadway, is recommended as best engineering practice to achieve lower speeds in school zones. Further, the 6 E's from SRTS calls for a multidisciplined approach for engineers, practitioners, and school communities as they seek to implement countermeasures: evaluation, education, encouragement, equity, engagement, and engineering. The 6 E's emphasize the need for and greater likelihood of success when multiple strategies work together to achieve a common goal.

Curb extensions and RRFBs complement reduced speed limits in school zones to improve yielding and compliance for drivers.

Learn more about the guide, research, MnDOT's SRTS initiatives, and ways to improve safety surrounding your schools at the Great Lakes ITE Conference in June – presented by Erin Jordan, PE (SEH) and Mark Wagner, PE (MnDOT).

210th Street and Lakeville Boulevard Improvements—Creating Community Connections

Kelly Besser, PE | Stonebrooke Engineering
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This article is a contribution from **Stonebrooke Engineering.**

This project for the City of Lakeville included reconstructing 210th Street between Kensington Boulevard and Holyoke Avenue and rehabilitating 210th Street and Lakeville Boulevard from Holyoke Avenue to Cedar Avenue.

210th Street was a narrow rural section with steep slopes on each side of the road and no pedestrian accommodations, with dozens of residential properties either backing up to the road or with frontage directly accessing it. 210th Street provides a key access route to Lakeville South High School, McGuire Middle School, John F. Kennedy Elementary School, residential districts, downtown Lakeville, Fairfield Business Park, and the Airlake Industrial Park. Our project team worked closely with the City of Lakeville to optimize a typical section that increased safety by introducing a center left turn lane and off-street shared-use paths on both sides of the road. We addressed multi-modal deficiencies and improved access to schools, parks, and downtown Lakeville destinations. The project also improved roadway operations and provided for increasing traffic levels with the addition of a roundabout at the 210th Street and Dodd Boulevard intersection. We also improved the shared use paths, pavement quality, and drainage facilities within the roadway rehabilitation areas.

This project began in February 2020 and was ongoing throughout the COVID-19 pandemic, which required a pivot in our 'normal' process for collaborating with our client and implementing public engagement strategies. Project team meetings and public open houses turned virtual, and our team utilized technology more than ever to connect with each other. Interactive maps were created for the project website to allow real-time community interaction. We transitioned the project website from an interactive public input forum used to collect feedback on the project design to an informative platform for the project's construction phase. This new and innovative public engagement process changed how we interacted with residents and the public and allowed for more participation by community members who may not otherwise have participated during the pandemic.

With 32 properties having driveway access directly off 210th Street and three schools along the route, public perception was vital throughout the project. In the first meeting with the public, we presented an aerial image of the project with no design completed and asked what was important to them. The community told us that vehicle speeds, safety, multi-modal accommodations, lighting, and pedestrian crossings were all items they would like addressed. This approach allowed them to influence the design rather than coming up with a design and telling them, "This is what we are going to do." Even during the COVID-19 pandemic, our team kept everyone informed through the public engagement process and strived to provide a sense of community collaboration in developing the design.

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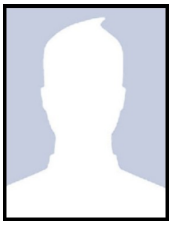
We actively involved the City of Lakeville during the design process by getting their input in real-time utilizing corridor model step-throughs and screen sharing during over-the-shoulder design workshops. Our modeling technology allowed us to efficiently decide what the alignment, profile, and typical sections should look like in different areas and weigh alternatives without having formal submittals of cross-sections and layouts printed to PDF or on paper. This dynamic review process was critical in staying on schedule for the property acquisition process and overall project delivery.

We staged the project so that nearly half of the corridor construction was completed by July 1, 2022, to accommodate the City's greatly anticipated Pan-O-Prog community festival, which hosts more than 10,000 attendees annually. Part of the festival area was within our project limits, including the Cruise Night Parade, which was routed through the project as usual without disruptions. During the design process, we worked with the Pan-O-Prog planning committee to ensure that event tents would still fit within the Lakeville Area Arts Center lawn, home to the famous Beer, Brats, and Bingo night festivities. The City wanted to ensure the community could enjoy the annual festival with as few changes as possible from tradition. Construction was fully completed in November 2022.

TECHNICAL COMMITTEE UPDATE

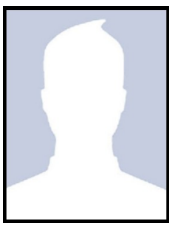


Geometric Design Technical Committee
Co-Chairs: **Amanda Vetter** amanda.vetter@apexenggroup.com
Recent Agenda Items: Presentation from Alan Scott on Tactile Walking Surface Indicators
Future Agenda Items: Roundabouts, Pedestrian Considerations at Intersections, Innovative Intersection Design.
Next Meeting: TBD in May

Intersection Traffic Control Technical Committee
Co-Chairs: **Nick Erpelding** NErpelding@srfconsulting.com **Mara Hayes** mhayes@srfconsulting.com
Recent Agenda Items: Sue Zarling from MnDOT presented on MnDOT's new signal pole standards
Future Agenda Items: Response discussion on the ITC annual signal operations practices survey sent to signal operating agencies in the section.
Next Meeting: Thursday, May 9th, 8:00AM-10:00AM, at SRF Minneapolis.

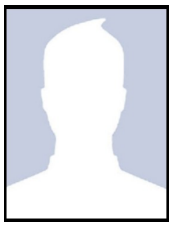
Emerging Technologies in Transportation Technical Committee
Co-Chairs: **Jake Eisinger** jake.eisinger@co.washington.mn.us, **Nathan Wade** nathan@flowlabs.ai
Recent Agenda Items: Advancements in AI Video Detection
Future Agenda Items: Open Data Standards by Open Mobility Foundation
Next Meeting: Tuesday, June 4th, 10:30AM, Virtual

Complete Streets and Safety Committee
Co-Chairs: **Sarah Peterson** sarah.peterson@hdrinc.com **Sri Durga Yada** SriDurga.Yada@hdrinc.com
Recent Agenda Items: Capitol City Bikeway (CCB) – Kellogg Boulevard from Jackson Street to St. Peter Street Project.
Future Agenda Items: BRT, Project site visits, accommodating peds/bikes in work zones, pedestrian toolkits, innovative project solutions, statewide pedestrian crash study, ped facility LOS, and more.
Next Meeting: TBD



Planning Methods and Applications Technical Committee
Co-Chairs: **Rachel Wiken** Rachel.Wiken@metc.state.mn.us, **Erik Kappelman** EKappelman@srfconsulting.com
Recent Agendas Items: No recent meetings
Future Agendas Items: TBD
Next Meeting: TBD

Traffic Operation and Maintenance Discussion Group
Committee Chair: **Greg Boche** greg.boche@woodburymn.gov
Recent Agenda Items: ATSSA How-To, Centracs server storage, BBU battery replacement, swing away signal mast arms, striping, work zone training.
Future Agenda Items: Round Table, topics TBD.
Next Meeting: Wednesday June 5th, Time TBD, Location: TBD.



Simulation and Capacity Analysis Technical Committee
Co-Chairs: **Sharijad Hasan**, md.s.hasan@ndsu.edu **Sajid Raza** sajid.raza@mbakerintl.com
Recent Agenda Items: Fabio Sasahara, an associate director at the McTrans Center at the University of Florida, presented case studies of HCM7's new features.
Future Agenda Items: TBD
Next Meeting: TBD with potential collaboration with the ITC committee.

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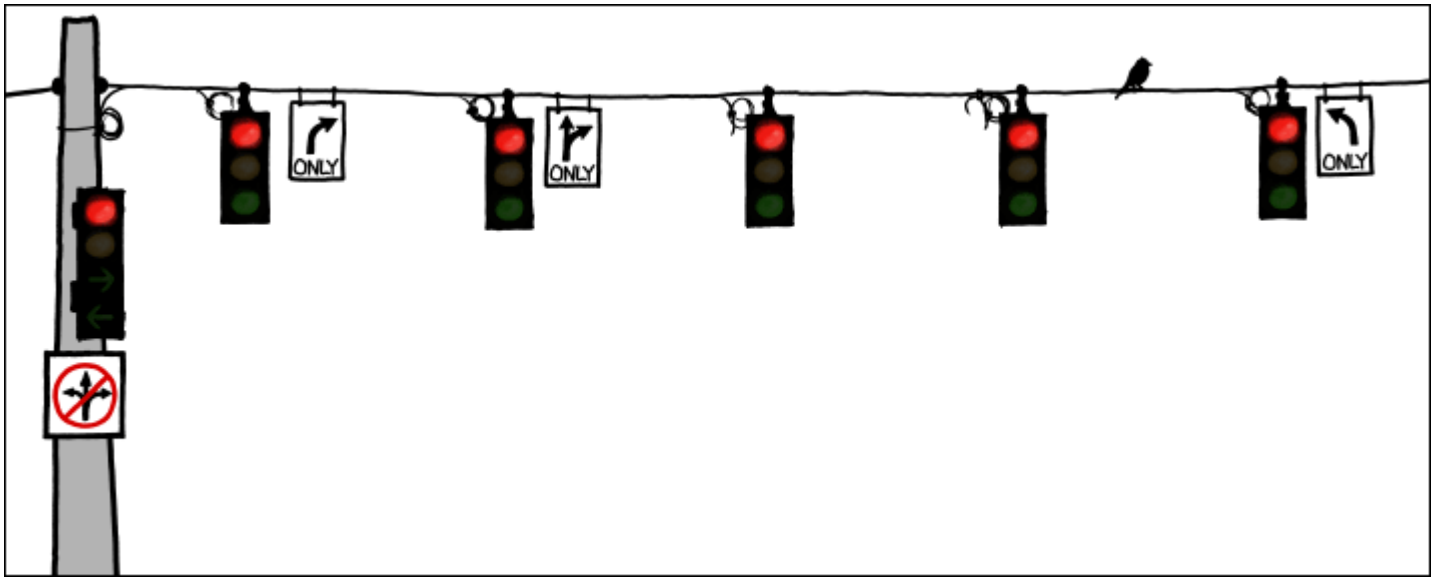

MEMBERSHIP UPDATE

New Members

Mark Johnson, Millerbernd Manufacturing Company

Josh Maus, Sambatek

Rahya Geisler, Minnesota Department of Transportation

Matt Filippelli, University of Minnesota

Dev Khalsa, SRF Consulting

Derek Fender, TKDA

Steven Voelker, Stantec

Jacob Ives, City of Northfield

Lonn Koranda, City of Minneapolis

Kevin Thomsen, City of Minneapolis

Kalvin Strecker, Houston Engineering

Moves

Tyler Krage, Dakota County, formerly City of Chicago

Bryan Larson, Dakota County, formerly KLJ

Gina Heim, SRF Consulting, formerly University of Texas at Austin

George Stuempfig, Isthmus Engineering, formerly SRF Consulting

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