In May 2019, Governor Tim Walz signed legislation giving all cities in Minnesota new speed limit authority beginning August 1, 2019. In response, the City of Saint Paul, in coordination with the City of Minneapolis, took the opportunity to evaluate speed limits on city owned streets. The evaluation resulted in a plan to lower speed limits on most city streets, which the City is currently in the process of implementing.

The first step in the City’s process was to develop a speed limit evaluation work plan, which included four major components:

- Technical evaluation of speed limits on city streets focusing on determining the appropriate speed limits for different city streets and how any changes should be signed.
- Internal coordination which included involving and getting feedback from key internal stakeholders and keeping City leadership and policy makers informed.
- Coordinating and communicating plan decisions with partner agencies including Ramsey County, MnDOT and the City of Minneapolis, as the speed limit changes also have impact on their roadways in St. Paul.
- Developing a communication and public education plan for the general public.
### EXECUTIVE COMMITTEE

<table>
<thead>
<tr>
<th>Position</th>
<th>Name</th>
<th>Affiliation</th>
<th>Contact Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>President</td>
<td>Jacob Folkeringa</td>
<td>SRF Consulting Group</td>
<td><a href="mailto:jfolkeringa@srfconsulting.com">jfolkeringa@srfconsulting.com</a></td>
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<tr>
<td>Vice President</td>
<td>Kevin Peterson</td>
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</tr>
<tr>
<td>Secretary</td>
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</tr>
<tr>
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</tr>
<tr>
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</tr>
<tr>
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### STANDING COMITTEES

<table>
<thead>
<tr>
<th>Subcommittee</th>
<th>Chair</th>
<th>Contact Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Young Member Committee</td>
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<tr>
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</tr>
<tr>
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### TECHNICAL COMMITTEES

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<tr>
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<tr>
<td>Geometric Design</td>
<td>Ben Hobert, SRF Consulting Group</td>
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<tr>
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<td>414.323.3450 <a href="mailto:pdhakal@isthmusengineering.com">pdhakal@isthmusengineering.com</a></td>
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<tr>
<td>ITS</td>
<td>Mike Kronzer, MnDOT</td>
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<tr>
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<tr>
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<tr>
<td>Traffic Operation and Maintenance Discussion Group</td>
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</tr>
<tr>
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<td>651.333.4144 <a href="mailto:MPowers@srfrconsulting.com">MPowers@srfrconsulting.com</a></td>
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### MIDWESTERN ITE

<table>
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<tbody>
<tr>
<td>Midwestern ITE District Director</td>
<td>Kristi Sebastian, Dakota County 952.891.7178 <a href="mailto:kristi.sebastian@co.dakota.mn.us">kristi.sebastian@co.dakota.mn.us</a></td>
</tr>
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<td>Midwestern ITE District NCITE Officer</td>
<td>Scott Poska, Alliant Engineering, Inc. 612.767.9369 <a href="mailto:sposka@alliant-inc.com">sposka@alliant-inc.com</a></td>
</tr>
</tbody>
</table>

www.nc-ite.org
What a year 2020 has been! With all that has happened over the past year it seems like it has been several years since I have seen many of you in person. NCITE started off 2020 like every other year with some great in-person events when all of the sudden this pandemic called COVID-19 hit. We started off by taking things week-by-week. By the end of the spring we were cancelling months of activities at a time. Before we knew it most in-person events for 2020 were cancelled. A lot of us are still working from home and have changed our daily routines. Despite this “organized chaos” I continue to appreciate all of the new opportunities this year has provided. While I couldn’t see most of you in person, we had record numbers at our virtual events with people attending from all over the Section – let’s continue to build on this in the year to come!

We recently finished off the year with NCITE’s Annual Meeting. While it was a virtual event I hope everyone had a great time reviewing our accomplishment from 2020, socializing over trivia, and raising over a thousand dollars for NCITE scholarships. Some other highlights from the meeting included:

- Awarding $4,000 in student scholarships
- Presenting Kristin Carlson with the Young Transportation Professional of the Year Award
- Presenting Randy Newton with the Transportation Professional of the Year Award
- Presenting the North Dakota DOT, City of Fargo, and SRF Consulting Group with the Transportation Achievement Award for the Main Avenue Reconstruction project.

Introducing the 2021 NCITE Executive Board consisting of: President Kevin Peterson, Vice President Tyler Krage, Secretary Natalie Sager, Treasurer Jeremy Melquist, Directors Cortney Falero and Mark Powers, Section Representative Jeff Preston, and Past President Jacob Folkeringa

There are countless people I need to thank for making 2020 such a successful year. From the 2020 Executive Board, to the committee chairs, the technical committees, and to all of you, our members – thank you! While we continue to establish the “new normal” I’m excited by what the future brings and the types of events and opportunities that NCITE can provide for its members – you’re in great hands with your new president Kevin Peterson.

Stay healthy, stay safe, and I look forward to seeing you in 2021!
ITE Calendar for District, Section, & Chapter Meetings
Stay Connected with Virtual Events
Online | Dates Vary

Attend an Upcoming NCITE Technical Committee Meeting!
Check out upcoming topics here.
For more information on the committees and how you can get involved:

For professional development opportunities:
http://nc-ite.org/content.php?page=Professional_Development_Meetings
### September Section Meeting
The September Section Meeting featured a presentation by Brandi Popenhagen from HDR and Jennifer Wiltgen from MnDOT on the Planning and Environmental Linkages (PEL) study that is being completed on the TH 65 corridor. This study aims to determine possible roadway alternatives to improve safety, capacity, access, and mobility for the corridor, and is the first study of its kind in Minnesota.

### October Section Meeting
The October Section Meeting featured a presentation on ATSPMs by Steve Misgen & Derek Lehrke from MnDOT.

We continue to iterate the way we complete these meetings, and this time has been a perfect opportunity to try out some new things. However, if you have anything that may make these meetings work better or enhance the value for the section, we’d love to hear your thoughts! Please let any your thoughts be known to a member of the board.
The Younger Member Committee ushered in the fall season with a podcast "club" event to share thoughts and experiences from engineering and planning backgrounds about transit design <see attached picture>. Attendees discussed the podcast episode "Missing the Bus" produced by 99% Invisible while sipping on seasonal beverages of their choice. Stay tuned for future podcast club events and send your suggestions to Jack Olsson at jack.olsson@kimley-horn.com.

Special thanks to the outgoing YMC Chair Kristin Carlson for her two years of fantastic leadership and hard work for the Younger Member Committee. Stay tuned as we welcome in a new YMC vice-chair later this year!

If you would like to be added to the YMC email list, or know of any new hires/coworkers that would enjoy our events, please send email addresses to Kristin Carlson (carl4498@umn.edu) or Jack Olsson (Jack.Olsson@kimley-horn.com)
To assist in the evaluation process, the City created a technical advisory group which included members from various City departments and divisions including the Police Department, the City Attorney’s Office, Traffic Engineering, Traffic Operations, Transportation Planning, Street Design and Construction, Communications, and Planning and Economic Development. This group laid the groundwork for the City’s Speed Limit Evaluation Report and speed limit recommendations.

The new speed limits in Saint Paul are now 20 mph for local residential streets; 25 mph for larger, arterial and collector city-owned streets; and 30-plus mph for a few city-owned streets. Per Minnesota law, the City does not have authority to change the speed limits on county or MnDOT roadways, which will remain. The signing plan that Saint Paul prepared in coordination with the City of Minneapolis was to utilize “gateway signs” at the entry points to both cities. The gateway signs, shown at right, indicate that the citywide speed limit is 20 mph unless otherwise posted.

The speed limit changes also necessitated revising the speed-based timing parameters at the City’s 430 traffic signals in step with the sign revisions.

Saint Paul Engineering staff understood early on that the re-signing and signal retiming efforts would require significant staff time and resources and hired Alliant Engineering to develop plans for City maintenance forces to install the new speed limit signage as well as perform measurements and calculations for the revised signal timings. The Alliant team, in a collaborative effort with Saint Paul Traffic Engineering staff (HunWen Westman and Randy Newton), developed plans for the speed limit signing for each of the City’s twenty signing “refurbishment” zones, which are geographically assigned subareas within the City. In total, the plans included approximately 750 25 mph speed limit sign installations and 150 gateway sign installations. This approach worked well for plan development and quality management, as signs were easier to track within the geographical zones. It also made phased signing installations easier, as Alliant was able to produce plans in 3 to 4 zone packages. This kept installation crews active in clear, focused areas while the next batch of plans were developed. The issue with this approach is that some of the larger roadway corridors span multiple refurbishment zones, and thus, corridors were not all signed consistently during the same timeframe. In hindsight, the project team agreed that the installation plan may have been better organized by corridor rather than refurbishment zone, especially considering the City’s joint effort to re-time their signal systems to reflect the new corridor speed limits and the coordination needed between the two efforts.

As of October 2020, City maintenance forces have installed all of the 25 mph signing across the City and are preparing to install the gateway signage. The City has gotten mostly positive feedback on the new speed limits, but as with any other major change, members of the public will have different opinions and reactions. Randy noted that he would like to give the new speed limits “time to breathe” before doing any evaluation or tweaking of the speed limit signage, likely not until early 2022.

Special thanks to Randy Newton for his input and collaboration on the development of this article. Feel free to contact Mike McCurdy at mmccurdy@alliant-inc.com with any questions about the project.
Geometric Design Technical Committee
Committee Chair: Ben Hobert — bhobert@srfconsulting.com
Recent Agenda Items: No Recent Meetings
Future Agenda Items: Freeway System Interchange Study
Next Meeting: TBD

Intersection Traffic Control Technical Committee
Committee Chair: Pravin Dhakal
Recent Agenda Items: Use of 4 loop systems for Flashing Yellow Arrow approaches, POOFYA vs Ped Protect Logic, Dynamic FYA, ITE Clearance Interval Guideline thoughts and concerns.
Future Agenda Items: TBD
Next Meeting: TBD

ITS Technical Committee
Committee Chair: Michael Kronzer - michael.kronzer@state.mn.us
Recent Agenda Items: No Recent Meetings
Future Agenda Items: TBD
Next Meeting: TBD

Pedestrian and Traffic Safety Technical Committee
Committee Chair: Stephen Smith
Recent Agenda Items: Began the process to become the Complete Streets and Safety (CSS) Committee. The first meeting under the new name was a panel on public engagement.
Future Agenda Items: Pedestrian Toolkits, Complete Streets, Equity & Street Design, Transit Operations
Next Meeting: TBD

Planning Methods and Applications Technical Committee
Committee Chair: Krista Anderson - kanderson@srfconsulting.com
Recent Agenda Items: New Population Synthesizer Application, TBI Results
Future Agenda Items: Updated Regional Network status, Transit Model Updates
Next Meeting: TBD

Traffic Operation and Maintenance Discussion Group
Committee Chair: Adam Bruening - adam.bruening@co.washington.mn.us
Recent Agenda Items: No Recent Meetings
Future Agenda Items: TBD
Next Meeting: TBD (First Wednesday of each month)

Simulation and Capacity Analysis Technical Committee
Committee Chair: Mark Powers - MPowers@srfconsulting.com
Recent Agenda Items: TBD
Future Agenda Items: TBD
Next Meeting: TBD
Planning and Immigration

Haila Maze, AICP | Bolton & Menk

With the important exception of indigenous people, most United States residents today can trace their origins back to other nations. This article will provide a brief history of immigration in the US, an assessment of its impacts, and suggestions on how planners can address current concerns.

Immigration History

Immigration is motivated by both push (reasons to leave) and pull (reasons to come) factors. Immigration patterns to the US have changed over time in response to political and social factors. As industrialization and the inflow of immigrant workers and their families fueled rapid growth of cities, planners responded to public health and safety needs regarding access to improved living and working conditions.

![](chart.png)

FOREIGN BORN % OF POPULATION

Source: US Census Bureau

(Continued on page 10)
The impact of immigration on the United States has been immeasurable. There are many ways in which it contributes to society.

- **Populating and repopulating areas.** Like many developed nations, the native born birth rate in the United States has declined. Immigrants replenish the population with younger people.

- **Filling job vacancies.** Immigrant workers have come to play an important role in the workforce, as the native born one ages.

- **Revitalizing retail and services.** Immigrants are on average more entrepreneurial. This fuels growth of business and industry, especially small scale and startup enterprises.

- **Making unique places.** Immigrants from other cultures bring unique food, art, music, and other cultural distinctives that make places interesting and distinct.

- **Diversity of insights and perspectives.** In an era of rapid change, diversity is a strength. New approaches and ideas help to fuel creative solutions.

### Immigrants and the economy in:

#### Minnesota

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#### North Dakota

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<td>Residents</td>
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#### South Dakota

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New American Economy, 2018 data

www.nc-ite.org
What Can Planners Do to Help?
Despite the benefits associated with immigrant populations, many communities have expressed concerns about the nation’s ability to accept and assimilate immigrants. The following section demonstrates how planners can help.

Issue #1: Learning Curve
With people moving to the country, there is often a basic unfamiliarity with how things are done here. The ways of government, culture, society, and work may be significantly different where they come from. Information overload, balancing multiple priorities, and language barriers can add to the challenge.

Planners can assist with education and outreach to connect, inform, and include people in public processes. It may also be a reason to simplify rules and regulations, increase transparency of public processes, and work with liaisons and partners to make connections. These improvements can benefit not only new immigrant populations, but also many others who may be less familiar with these topics.

Issue #2: Cultural Distinctives
Another area of concern with immigrants may be cultural distinctives. Each culture brings its own practices with regards to food and drink, recreation, religion, business practices, dress, living arrangements, and social interactions.

Planners can assist by educating themselves and others on cultural differences of which they may be unaware. This can provide insight as to how regulations and practices might have unforeseen consequences and need to be adjusted to better accommodate newcomers – or on the other hand, how immigrants may need to be educated about these issues. Planners can also encourage recognition and even celebration of positive differences that bring value, interest, and variety to the community.

Issue #3: Assistance Needed
Probably the most challenging issue is when immigrants arrive under duress. They may be refugees from conflict, or just seeking a better life than is available in their place of origin. As a result, they may need at least some initial assistance from the government or nonprofits to meet their basic needs before they are able to be fully self-sufficient.

Planners can provide referrals for needed programs and services, support affordable housing options, promote workforce development strategies, and even help to hire diverse workers and partners. It is important to acknowledge that solutions here can span the full political spectrum – both helping people in need through assistance and empowering those who have a desire to work to succeed here.
While necessary for road maintenance, highway work zones affect traffic safety and mobility. An average of 680 people died each year as a result of crashes in work zones from 2010 through 2018 (National Work Zone Safety Information Clearinghouse). Work zone crashes contribute to 10 percent of overall congestion and 24 percent of nonrecurring freeway delays nationwide. More work zones will be needed as the transportation system ages, which means these impacts will increase. Intelligent Work Zone (IWZ) systems are one approach to mitigating these impacts.

Intelligent Work Zone (IWZ) systems use advanced technologies to improve safety and mobility. Data provided by IWZ systems provides real-time traffic conditions, which can be used by motorists to alter their travel behavior, by contractors and transportation agencies to manage or alter traffic control strategies, or by connected autonomous vehicles to adjust to work zone conditions.

These systems provide immediate warnings, such as to drivers that traffic is stopped ahead or that a slow truck is entering from a work zone or to workers that a vehicle is intruding into their work area.

SRF worked closely with the FHWA during development of the Guide for ITS in Work Zones and was an active participant in the Every Day Counts initiative for Smart Work Zones. We have also been actively engaged with national, local and regional associations and have participated and presented IWZ at conferences, workshops, webinars and online learning venues. These have included ITS America, ITS Heartland and ITS MN, ATSSA national and local events, Upper Great Plains Transportation Institute’s Transportation Learning Network, Midwest Work Zone Roundtable and others. This sharing of information has resulted in board understanding of needs and capabilities of state-of-the-art IWZ.

Implementing IWZ

IWZ requires coordination that starts early in project development and continues through project completion. Collaboration between all disciplines including planners and designers working alongside contact, construction and law enforcement is needed for a successful deployment. Similarly, it is essential to engage maintenance forces in selecting appropriate mitigations while managing the system after ribbon cutting of the project and opening the roadway to traffic.

IWZ Planning and Resources

IWZ systems have evolved from being an experimental strategy for improving safety, operations, and productivity to more of a “mainstream” easily accessible and affordable tool.

SRF has assisted the Iowa DOT in developing and implementing their Work Zone Management Service Layer that is integrated into their Transportation Systems Management and Operations (TSMO) Plan.
Critical portions of this include development of procedures, specifications, standards and guidelines for IWZ systems. Selection of appropriate deployment procurement strategies that meet the needs of the agency are critical to the success of IWZ systems. Consideration of IWZ early in project development and appropriating funding for these systems is essential for including these systems in contract and project documents and designs.

To accomplish this, it is important to understand how effective IWZ systems are in mitigating mobility and safety impacts. In contrast with shorter term IWZ solutions, other safety and operational considerations have better understood benefits and longer timeframes over which the benefits can be realized. This makes it essential to establish robust quantifiable performance measures such as delay and crash reduction to demonstrate the effectiveness and value of the IWZ systems. These can then be used to define warrants for when IWZ systems should be considered or required.

**IWZ Operations**

While working with the Minnesota DOT we discovered that it is essential to provide daily monitoring of the IWZ systems to ensure both effective operation and that contractual requirements are met. Agency field operations personnel stressed that they do not have the background or time to manage these systems daily. They suggested that automated reporting tools or assigning these duties to others is critical to keeping project personnel and managers advised of performance issues and being able to react to the ever-changing work zone environment.

**IWZ Future**

Connected and automated vehicle (CAV) technologies are rapidly advancing. The ways that these technologies may reach the market are still emerging as well. SRF recognizes there are two different models evolving for connected vehicles. The first leverages existing data infrastructure, such as cellular networks, to provide information from centralized databases to in-vehicle systems about work zones. In this model transportation agencies provide work zone data that can be used by OEMs or aftermarket systems to advise drivers and autonomous vehicles. The second model involves the relatively new emerging use of peer-to-peer connectivity to share this information between vehicles and work zone equipment. The technical standards used in this model are evolving, and the role of public transportation agencies is still unclear. SRF is watching both of these models and providing state-of-the-practice information to our clients as CAV matures.
Cloud-Based Software Platform Leveraged to Continually Optimize Traffic Signal Control

Matt Allwood, Regional Support Manager | Traffic Control Corporation

A highly flexible cloud-based software solution platform will be leveraged in the city of Fargo, ND to help maximize their ITS investment by automating their traffic control operations. The city will use the new technology to optimize mobility and roadway safety. The new software solution is a cloud-based signal performance measures (SPM) solution combined with, signal timing optimization, and real-time adaptive signal control.

Having decided in 2018 to modernize its traffic control with leading-edge technology, in February of 2019, the city of Fargo put out for bid for an Advanced Traffic Management System (ATMS) and system-wide traffic controller upgrade. An addition to the ATMS upgrade, the city wanted to have the ability to add SPM and adaptive signal control operations. Fargo planned to deploy the adaptive signal control solution to one of its corridors to evaluate the operational feasibility and the software’s ability to manage corridor traffic with this next-generation technology.

In May 2019, Fargo selected to work with Traffic Control Corporation to deploy Econolite’s Centracs Mobility solution along with Cobalt traffic controllers. As of December 2019, the ATMS and controller deployment portion of the project was completed and accepted by the City. Unfortunately, the response to the COVID-19 pandemic and the necessitated restrictions slowed the installation of detection sensors to collect the traffic data required for the SPM and adaptive signal control to work properly. Today, Fargo is collecting real-time traffic data at 30 intersections from a combination of loop detectors and Autoscope Vision video sensors. They look forward to realizing the full benefits from the SPM and adaptive signal control features, as more of the detection sensors are installed and start to collect data. This will maximize the automated mobility and safety benefits of the new Centracs Mobility platform.

The robust software solution’s flexible architecture enables municipalities and transportation agencies to easily integrate legacy detection systems, as well as the latest in sensor technologies. As will be the case with the city of Fargo, the new software platform can be customized for any deployment level, delivering the highest levels of traffic control interoperability and automation.

The real-time adaptive signal control solution is built upon Econolite’s cloud-based SPM solution that provides proactive signal optimization using 1/10-second resolution traffic data. The real-time adaptive signal control solution balances sustainability and reliability with the latest in adaptive algorithms to automatically reduce traffic congestion and commute times while increasing safety.

The software platform includes the fundamental traffic data analytics, signal status and display, and automated traffic data reporting of SPM. The cloud-based high-resolution traffic data collection and analytics platform is based on advanced optimization algorithms leveraging the Purdue Link Pivot analysis with Red and Green Occupancy Ratio.

For more information contact Matt Allwood with Traffic Control Corporation at mallwood@tcc1.com.
ITE LOL

Productivity Before A Holiday Weekend

Source: GraphJam.COM
### MEMBERSHIP UPDATE

<table>
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<tr>
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<th>Moves</th>
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<tbody>
<tr>
<td>Ronald M. Rauchle - Minnesota Department of Transportation</td>
<td>No Moves</td>
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<td>Kellie Elizabeth Urman - University of Minnesota</td>
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<tr>
<td>Nina Myszkowski - University of Minnesota</td>
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<td>Olivia Polinsky - HDR</td>
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<td>Ratna Divya Yasoda - North Dakota State University</td>
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