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Issue Number 85, September 2018

# State Aid E-Scene

## Emergency Relief update

By: Bill Meinholz, Assistant Project Development Engineer

Flooding has been fast and frequent this summer. One large storm system wreaked havoc across Minnesota starting June 16, 2018 and ending July 12, 2018. Lots of damage was reported throughout the state. State Aid has been assisting Carlton and Koochiching counties in District 1, Cottonwood, Jackson, and Nicollet counties in District 7, and Lyon, Murray, Redwood, and Renville counties in District 8 with their damage to major collector roadways and above. These roadways are eligible for the FHWA Emergency Relief Program if a certain threshold is met and this event has caused around \$4.5 million in damage on the state aid system. We are in the process of submitting Detailed Damage Incident Reports (DDIR) for each and every site.

Last year, the FHWA developed and released a computer program called Mobile Solution for Assessment and Reporting (MSAR) to document and record DDIRs for any emergency event throughout the United States. State Aid

was piloting this program when flooding started, so we went active and decided to test it in an actual event. When a disaster strikes, field users are able to use MSAR to collect and report damage immediately. The field application uses geo-spatial tracking, online forms, and can capture photos. The second component consists of the webportal where DDIRs can be edited or deleted, additional data can be entered, pictures

uploaded, and reports created. Hawaii is currently active using MSAR for Hurricane Lane, Ohio used MSAR earlier this summer for flooding, and the U.S. Forest Service has used MSAR for all of the fires this year. Hurricane Maria in Puerto Rico and Hurricane Harvey in Texas also used MSAR and helped both of these communities recover from the devastating storms.



CSAH 5, Lyon County

# SRTS infrastructure solicitation coming soon

By: Sara Pflaum, Program Support Engineer

The legislature awarded the Safe Routes to School (SRTS) program \$2 million in state bond funds for infrastructure projects. State Aid, along with the Transportation Alternatives Program (TAP), will be soliciting for projects statewide at the beginning of October. Projects must be completed by 2021 and need to be at least \$100,000 to be eligible. These grants can fund 100 percent of construction costs, up to \$300,000.

The TAP solicitation will also consider SRTS infrastructure projects as a

category for 80 percent federal funding in FY 2023, however, these projects must be located outside the Metro District.

Additionally, those that have already been selected for funding through the TAP or the Regional Solicitation, this solicitation will also consider applications for the local match for projects.

If you plan to apply for state bond funds for a SRTS infrastructure project, please review the changes the legislature made for eligibility in 2015. This will be the first

solicitation since those new eligibility rules were enacted. You can find an explanation [here](#) (PDF).



# LPP saves you time, cost and requirements, while improving customer experiences

By: Greg Coughlin, Project Engineer

For the past couple of years, the Local Partnership Program (LPP), formerly known as the Cooperative Agreement Program, has been going through an overhaul focusing on customer desired outcomes.

Over 200 engaged customers provided ideas for process improvements to save time, save cost and reduce requirements. The MnDOT Senior Leadership Team approved 24 recommendations on September 19, 2017. To illustrate, for geometric design level two and three type projects, the MnDOT district now has autonomy and full authority to approve construction plans with no final review and approval at Central Office.

Recommendations were entirely based on customer feedback received during focus group conversations. Improvements are summarized in six different themes.

- Transparency, equality, and consistency.

- Coordinated processes and district autonomy.
- Timeliness and fewer reviews.
- Project flexibility and scalability.
- Definitions and guidance.
- Increased program funding.

A number of changes and improvements are currently taking place. Program funding has increased and MnDOT districts will consistently program 5 percent of their trunk highway allocation to the LPP. Districts will announce and solicit local partners for project ideas on an annual or biannual schedule. Project selection teams, including local partners, will select projects. The LPP will be managed and coordinated by the District State Aid Engineer (DSAE). District staff, dedicated to the program and working for the DSAE, will serve as the project manager and be your single point of contact. A number of process steps related to geometric layouts and construction plans

have significantly been reduced or eliminated because they did not add value. LPP guidance will be coming in the fall of 2018.

“This program is not about the money,” said Mitch Rasmussen, State Aid Engineer. “It is about agencies desiring to develop relationships, form partnerships, and deliver improvements at the intersections of our transportation systems.”

Contact your [DSAE](#) for additional information on the LPP.



# Additional SRTS funding from FHWA

By: Sara Pflaum, Program Support Engineer

The FHWA selected MnDOT's Safe Routes to Schools (SRTS) program to receive additional SAFETEA-LU funding, resulting from unused money from other states. State Aid and the Office of Transit and Active Transportation are sharing the money to use on a combination of infrastructure and non-infrastructure projects.

State Aid is using this funding on four projects. Two construction projects that began construction in 2018 were selected to receive funding. The Minnesota's Best Practices for Pedestrian/Bicycle Safety Handbook will also be updated with this funding.

Furthermore, State Aid will also be working with an engineering consultant to hold a solicitation for cities and counties to develop and complete an SRTS engineering plan. This would incorporate technical engineering analysis and perspective to inform and support plan recommendations. Plans would provide clear justification of the need for improvements so that schools and local agencies can work to fund and implement infrastructure improvements. This approach

aims to strengthen infrastructure recommendations and improve MnDOT's ability to allocate state and federal infrastructure grant funds and be more confident in allocating financial resources on projects that are warranted and will be effective. The solicitation for local agencies interested in completing these engineering plans will take place next year.

In 2016, State Aid awarded grants for two engineering plan pilot projects.

Joe Gustafson, Washington County Traffic Engineer, managed one of the pilot projects for Cottage Grove Elementary School.

"The SRTS Engineering Plan study gave us an opportunity to develop a data-driven approach to improving non-motorized access to schools. In addition to identifying critical gaps in the nonmotorized network, the study also looked systematically at the suitability of every existing route segment and roadway crossing, and identified realistic and proven strategies that could be deployed to improve safety and comfort

long these routes. The study quantified the number of homes that connect to the school via each route, to allow for the improvements to be strategically implemented to maximize the number of homes connected to the school via high-quality routes."

Victor Lund, St. Louis County Traffic Engineer, managed the second of the pilot project for the Hibbing School District.

"The SRTS pilot study was a great opportunity to consider what is truly essential in creating a valuable Safe Routes to School Plan. The pilot study found that modeling the SRTS plan off the County Road Safety Plans provided off-the-shelf projects that local communities and schools could implement in the near term as well as plan for implementing larger projects in the long term."

More information on the upcoming solicitation will be posted on the [Grants webpage](#) as it becomes available. If you have any questions, please contact Sara Pflaum at 651-366-3827 or [sara.pflaum@state.mn.us](mailto:sara.pflaum@state.mn.us).

## Online State Aid trainings

By: Alyssa Rubenstrunk, Website & Application Support

In March, State Aid launched 30 online trainings. The trainings are currently available on our website on the [Training webpage](#).

The trainings cover various State Aid topics, programs, and processes. On the webpage, the trainings are divided into three categories: State Aid 101, State Aid, and State Aid Finance. You'll also notice a short description next to each training topic.

The developed trainings are in PowerPoint formats, making them easily accessible and printer-friendly for those wanting hardcopy versions. The slides may include further details in the "notes" section and the last slide in each training has a contact person if you have further questions on the topic.

If you haven't already had the opportunity review, visit our [Training webpage](#) to access all of the trainings.



# New NPDES Construction Stormwater General Permit

By: Gary Reihl, Federal Project Development

The new National Pollutant Discharge Elimination System (NPDES) Construction Stormwater General Permit (let's call it the 2018 permit) was issued on Wednesday, August 1, 2018. The permit can be viewed on the [Minnesota Pollution Control Agency's Construction Stormwater webpage](#).

Under the new permit, there is an 18 month grace period for construction projects that began under the 2013 permit. Those projects can stick with the 2013 permit if they will be completed before Feb 1, 2020. Projects that will not be complete by Feb 1, 2020 will need to update Stormwater Pollution Prevention Plans (SWPPPs) by that date to ensure compliance with the new permit.

The 2018 permit looks very different than the 2013 permit due to extensive reformatting, however, the practical changes were not major. Here is a quick summary of what has changed:

## 1. Formatting and terminology

- Numbered sections and items instead of outline format.
- Changed to active voice.
- The term "Final Stabilization" has been replaced with a set of "permit termination conditions." The requirements for termination are effectively the same.
- Added more definitions (section 25.1).

## 2. Procedural changes

- Coverage begins upon completion of the application and payment process (essentially as soon as the check clears the bank, rather than after a seven day waiting period).

## 3. Practical changes

- Ditches with 2 percent or less slope no longer require blanket

(section 8.8). NOTE: an upgrade to blanket may be required if other stabilization methods fail.

- Cannot disturb more land than can be effectively inspected and maintained (section 8.10).
- Sediment control at the base of stockpiles must be done in addition to the sediment control required at the project perimeter.
- If a 50' (or 100') natural buffer is not feasible, the SWPPP must document the reasons why (section 5.13).
- Use Redundant Perimeter Control if work encroaches into the 50' (or 100') natural buffer:
  - ⇒ Must be separated by at least 5' (unless infeasible);
  - ⇒ Sheet piling that effectively contains all stormwater can be considered to be redundant perimeter control (section 9.17).
- Inspection frequency increased to once every three days (instead of seven days) for projects within 1 mile and draining to prohibited waters (section 23.13). NOTE, projects with this requirement will be infrequent.
- Permit Termination Conditions, formerly called "final stabilization," now clarifies that vegetative cover is not required for areas such as the base of a sand filter (section 13.2, formerly IV.G.1).
- Hazardous materials no longer have to be protected from vandals, but need to be protected from spills, stormwater, or other discharge.
- Fueling no longer has to be done in a contained area, but safeguards to prevent and clean up

spills are still needed).

- The 2018 permit more clearly prioritizes volume reduction (infiltration) over other treatment methods -- filtration, wet sedimentation basin, or regional pond (section 15.5, formerly III.D.).
- Requirements for infiltration and filtration are now separated into separate sections (section 16 & 17, formerly III.D.1).
- More detailed requirements for infiltration design and location (section 16).
- Wet sedimentation basins within active karst terrain need an impermeable liner.
- For impaired waters, the 2018 permit deliberately leaves out the possibility that a SWPPP would have to incorporate specific Best Management Practices (BMPs) related to a Total Maximum Daily Load (TMDL) with a waste load allocation for construction stormwater. This implies the recognition that the BMPs already required by the permit are sufficient to protect such an impaired water.
- For temperature controls required near trout streams, the practice of minimizing new impervious surfaces has been removed.
- For temporary sediment basins, the 2018 permit removes the requirement to incorporate a method for complete drawdown for maintenance activities.



# PathWeb application

By: Joel Ullring, Pavement Engineer

PathWeb is now available, PathWeb is a web-based application for viewing your current road rating data and video logs. Over the past few weeks, county engineers were sent an invite for them and their employees to request access and create an account. If you didn't see the email and want access to the application, you can request access by submitting the approval form and following the instructions on how to get an account on the [PathWeb webpage](#) under the Pavement Management section under the Pavement tab on the SALT website. Once approved, you will then receive an email granting you access and instructions on verifying your account. Access to PathWeb requires county engineer approval. To validate the approval, the form must be sent to State Aid from the county engineer's email. There is no limit on the number of user accounts that a county may have.

PathWeb is a very user friendly application tool. The application may be accessed by most devices with an internet connection. The features of the application are:

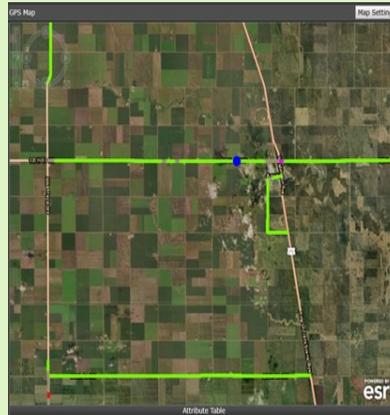
- GIS mapping
- 3D Surface Image
- IRI and Rutting Graphs
- Roadway Image Video Logs

In addition, a [PathWeb User Guide](#) is available.

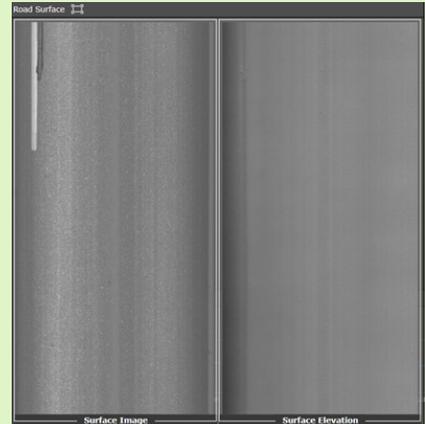
There is no direct cost to an individual county. The MCEA Board of Directors approved funding the annual license fee and data storage costs through the State Aid Administration Account.

If you have any questions contact Joel Ullring at [joel.ullring@state.mn.us](mailto:joel.ullring@state.mn.us) or 651-366-3831.

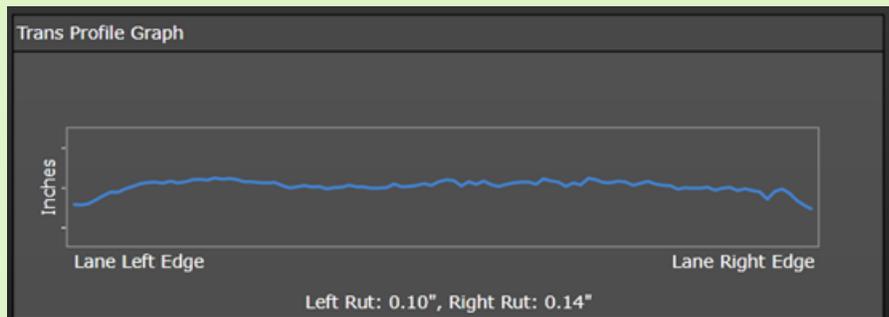
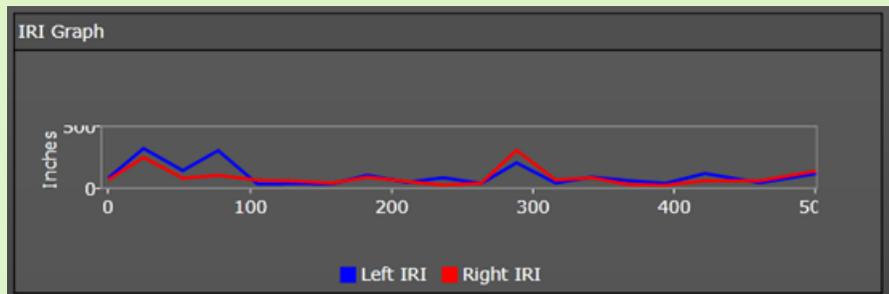
## GIS Mapping



## 3D Surface Image



## IRI and Rutting Graphs



## Roadway Image Video Logs



# New State Aid Project Map

By: Rick Kostohryz, Application Developer

We've recently deployed a new online [State Aid Project Map](#). Features of this new map include:

- Simplified legend
- Project search tool
- Compliant with MnDOT's new cartographic LRS mapping standards

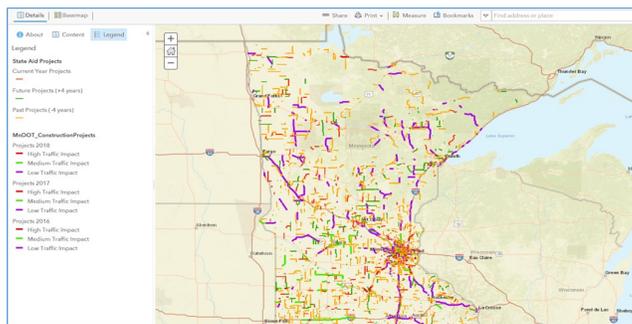
The new map also features layers for future projects (+4 years) and past (-4 years) on Minnesota's local state aid highway system that have known locations and construction schedules. Clicking a project line will display a pop-up dialog box with project details. Additionally, tied and suspended project layers are included.

The improved search tool is an exciting feature allowing the user to easily search and zoom to specific projects. Simply start typing the project number in XXX-XX-XXX format. Projects matching

that number will begin to display in a dropdown below the search prompt. Select a project from this list or complete typing the entire number to locate the project.

As with the previous version of the map, MnDOT's trunk highway project layer is included as well. This layer comes courtesy of MnDOT's Program and Project Management System.

The projects on the map are reliant on records within the centralized State Aid Project Tracking database and require key geographic and schedule information. Lines representing project are dependent on data gathered by our local partners thus geographic/schedule data gaps can occur and occasionally projects are misrepresented. Please contact [sal-tirhelp.dot@state.mn.us](mailto:sal-tirhelp.dot@state.mn.us) if you know of errors or omissions on the map.



# Rusty Patched Bumble Bee map

By: Gary Reihl, Federal Aid Project Development

The U.S. Fish & Wildlife Service (USFWS) has updated the High Potential Zones for the Rusty Patched Bumble Bee. Most changes occurred in Metro District, but a few new areas were also identified in the southeast corner (MnDOT Rochester District).

For those with DNR data access,

these updated polygons can be found at: Protected Species Data\Public Data\RPBB High Potential Zones. For those using Georilla, this update will be made soon.

Note that these shapes can also be viewed on the [USFWS Rusty Patched Bubble Bee webpage](#).

# Minnesota back under Obama-Era WOTUS

By: Gary Reihl, Federal Aid Project Development

The 2015, Waters of the United States (WOTUS) rule developed by the Obama administration was first published June 29, 2015. It was challenged in the courts and blocked. The Trump administration later stated, "The rule will not be applicable for the next two years, while we work through the process of providing long-term regulatory certainty across all 50 states about what waters are subject to federal regulation."

Now, the U.S. District Court for the District of South Carolina on Aug. 16, 2018 invalidated the Trump administration's attempt for a two-year nationwide delay of the rule. This action means the 2015 WOTUS rule, or clean water rule, is in effect in more than half the country (26 states, including Minnesota). In the 24 other states, the rule remains blocked by two other federal courts pending their review.

In Minnesota, the Corps is currently evaluating jurisdiction based upon the Clean Water Rule. Requestors of the Section 404 permit should continue with the existing submittal procedures and the Corps will evaluate jurisdiction based upon the 2015 rule.

Please contact a Regulatory Project Manager (see the [Regulatory Branch Project Managers map](#) (PDF)) or Omar Ortiz, State Aid Corps Liaison for specific questions about pending jurisdictional determinations or permit decision. Omar can be reached at [omar.m.ortiz@usace.army.mil](mailto:omar.m.ortiz@usace.army.mil) or 651-290-5358.

# IC & PMTP Quality HMA paving technologies

By: Joel Ulring, Pavement Engineer

There are two quality paving initiatives currently in place to provide contractors a better understanding how their Hot Mix Asphalt (HMA) paving operations are doing. They are Intelligent Compaction (IC) and Paver Mounted Thermal Profiling (PMTP). MnDOT added this as a special provision to the specifications for the 2018 construction season.

## What is IC?

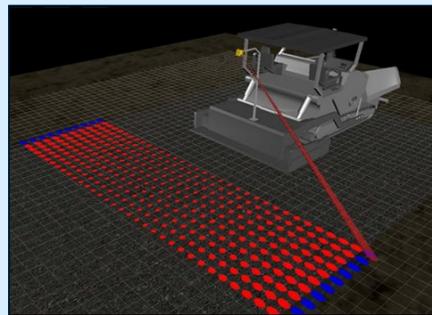
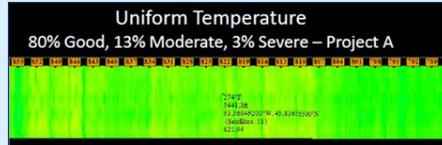
IC associated with placement of HMA is essentially documentation of a compaction roller's rolling pattern. IC uses GPS technology to record the rollers speed and location which allows mapping of the rolling pattern. The technology allows the monitor on the roller to change colors for each pass it makes. Therefore, the roller operator knows exactly where he has and hasn't compacted. The operator is literally painting the screen. With the addition of accelerometers and temperature sensors, data is also gathered on when vibratory action is on, the HMA mat temperature at the time it is compacted and the amount of compacted effort applied to the pavement.



## What is PMTP?

PMTP uses an infrared or photo imagery thermal camera to document the temperature of the HMA pavement directly behind the paver, immediately after it is placed. The technology is documenting temperature differentials

in the pavement surface. Temperature profiles are outputted as shown below.



PMTP includes GPS technology documenting the paver's location allowing the thermal data to be georeferenced to the roadway. The GPS data collected also documents paver speed and paver stops.

## Why should I specify IC & PMTP on my projects?

IC & PMTP are envisioned to improve the construction quality of HMA pavements. By placing HMA mixes at a more uniform and consistent temperature they are not as prone to aggregate segregation. The pavement should compact more uniformly and have more consistent density. Therefore, the result should be longer lasting pavements.

From the results seen so far by MnDOT and counties who have implemented these Quality Paving Initiatives on projects, Contractors are paying closer attention to their paving operations and the overall quality of HMA

pavements has improved. Equipment manufacturers are meeting the challenge by designing equipment that remixes the HMA just prior to paving. A new paver mixes HMA as it is transferred from the hopper to the screed and remixing material transfer devices.

## Where do I find out more information and receive assistance about IC & PMTP?

[MnDOT Advanced Materials and Technology Office](#) located at the Office of Materials and Road Research in Maplewood has information on their website, including: IC & PMTP Special Provisions, example IC & PMTP project files, manuals, guides, and videos to help you better understand the technology.

State Aid was proactive in assuring there is adequate support for local agencies when implementing these new technologies on their projects. Brad Canaday, a retired licensed land surveyor with MnDOT, was hired to serve part-time to provide technical support for these technologies. Most recently, Brad was the MnDOT Metro District Surveys Manager. Brad has over 44 years of experience as a surveyor and has been with MnDOT since August of 1983. This is a great fit for Brad who returned part-time for the 2018 and 2019 construction seasons. Brad can be contacted at [brad.ley.canada@state.mn.us](mailto:brad.ley.canada@state.mn.us) or 612-368-8848.



You may also contact Joel Ulring at [joel.ulring@state.mn.us](mailto:joel.ulring@state.mn.us) or 651-366-3831 if you have any questions.

# SRTS Planning Solicitation

By: Sara Pflaum, Program Support Engineer

A solicitation for planning assistance grants through the MnDOT Safe Routes to School (SRTS) program will open this October. Communities can learn more about the SRTS planning process and benefits on the [SRTS Resource Center website](#). For questions on how to apply for a

Planning grant, contact Dave Cowan at [dave.cowan@state.mn.us](mailto:dave.cowan@state.mn.us). Or 651-366-4180. Application materials and information will be posted on the [Planning Assistance Grants webpage](#) when the solicitation opens.

# Transportation Regional General Permits

By: Gary Reihl, Federal Aid Project Development

The Transportation Regional General Permit (TRGP) has been available since February 21, 2018, to authorize regulated activities which meet the terms and conditions of the permit and covers all transportation activities, not just road projects, under Sections 10/404 regulations.

5 categories:

1. Minor maintenance - linear transportation
2. Modification - linear transportation
3. New construction- linear transportation
4. Non-linear transportation projects
5. Transportation surveying

The transition, in Minnesota, from the old RGP 003/004 to the New TRGP goes like this:

- (NEW) TRGP effective date, February 21, 2018.

- (NEW) TRGP effective date, February 21, 2018.
- All applications received after this date will be issued the new TRGP.
- RGP-003/RGP-004 suspension, February 22, 2018.
- All application in process were suspended and the new TRGP was issued.
- RGP-003/RGP-004 revocation, September 4, 2018.
- All projects/construction NOT started by this date will need a new TRGP even if and old RGP -003/RGP-004 had been issued.
- RGP-003/RGP-004 complete activities, September 3, 2019
- All projects/construction NOT completed by this date will need a new TRGP. This means re-applying with the Corps for a new TRGP.

If you have any questions about the new TRGP, contact Omar Ortiz, State Aid Corps Liaison at [omar.m.ortiz@usace.army.mil](mailto:omar.m.ortiz@usace.army.mil) or 651-290-5358.



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# Employee News

After 44 years of MnDOT service, Deb Hall-Kuglin has retired. Deb has been working in the MSAS Needs Unit since 2009. Before coming to State Aid, she worked in Photo Services and the Planning and Program Division. We wish Deb well in her retirement and thank her for all her years of service.

Tara Olds is the new State Aid Program Support Engineer and Disaster Coordinator. Tara is replacing Mark Vizecky who took the Operations Engineer position within State Aid. Tara began at MnDOT in 2008 as a Graduate Engineer where she completed rotations in the State Aid Bridge Office, Foundations Office, Golden Valley Central Construction Office, and Metro Design. Following her rotations, she has worked in various offices within metro and CO, including: construction, ADA, program delivery, and transportation planning for the "Rethinking I-94" project. Tara graduated from the University of Iowa with a bachelors in Civil Engineering. In addition, she is currently pursuing a master's degree in Public Affairs from the U of M.

Girma Feyissa has accepted the Traffic Safety Program Support Engineer position. Girma is replacing Sulmaan Khan who moved to the Metro Project Management Office in April. Girma recently completed a 13-month mobility (April 2017-July 2018) at State Aid in our federal aid unit. We are excited to welcome him back. Girma will begin on September 19th.

Cindy Degener is now serving as interim State Aid Accounting Supervisor. Cindy has taken over for Candy Harding who had been the acting supervisor while Ann McLellan is on mobility until February.

Updated contact information can be found on the [SALT staff webpage](#) and [SAF Contact Us webpage](#).