



**TECHNICAL ADVISORY COMMITTEE MEETING**  
**WEDNESDAY, JULY 12, 2023 – 1:30 P.M.**  
**EAST GRAND FORKS CITY HALL TRAINING ROOM**

**PLEASE NOTE:** Due to ongoing public health concerns related to COVID-19 the Grand Forks/East Grand Forks Metropolitan Planning Organization (GF/EGF MPO) is encouraging citizens to provide their comments for public hearing items via e-mail at. To ensure your comments are received prior to the meeting, please submit them by 5:00 p.m. one (1) business day prior to the meeting and reference the agenda item(s) your comments address. If you would like to appear via video or audio link for comments or questions, please also provide your e-mail address and contact information to the above e-mail. The comments will be sent to the Technical Advisory Committee members prior to the meeting and will be included in the minutes of the meeting.

**MEMBERS**

Palo/Peterson \_\_\_\_\_  
 Ellis \_\_\_\_\_  
 Bail/Emery \_\_\_\_\_  
 Brooks \_\_\_\_\_  
 Riesinger \_\_\_\_\_

Mason/Schroeder \_\_\_\_\_  
 Zacher/Johnson \_\_\_\_\_  
 Kuharenko/Danielson \_\_\_\_\_  
 Bergman \_\_\_\_\_

West \_\_\_\_\_  
 Magnuson/Ford \_\_\_\_\_  
 Sanders \_\_\_\_\_  
 Christianson \_\_\_\_\_

1. CALL TO ORDER
2. CALL OF ROLL
3. DETERMINATION OF A QUORUM
4. MATTER OF APPROVAL OF THE JUNE 14, 2023, MINUTES OF THE TECHNICAL ADVISORY COMMITTEE

**ACTION ITEMS**

5. MATTER OF APPROVAL OF MPO SELF-CERTIFICATION ..... KOUBA
6. MATTER OF FINAL APROVAL OF THE BIKE/PED PLAN UPDATE ..... HALFORD

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- 7. MATTER OF APPROVAL OF 2023-2026 T.I.P. AMENDMENT #5..... KOUBA
  - a) Public Hearing
  - b) Committee Action

**NON-ACTION ITEMS**

- 8. MATTER OF UND INTERN UPDATE .....UND
- 9. MATTER OF UPDATE ON URBAN BOUNDARY MAP ..... KOUBA
- 10. MATTER OF UNIFIED PLANNING WORK PROGRAM..... HALFORD
- 11. OTHER BUSINESS
  - a. 2023/2024 Unified Work Program Project Update..... HALFORD
  - b. MPO Updates:
    - MPO Mid-Year Review ..... HALFORD
    - August TAC Agenda Items ..... HALFORD
    - Obligated 2023 Project Discussion ..... KOUBA
    - Update To 2023-2024 T.I.P. Amendment #4 ..... KOUBA
  - c. Agency Updates
- 12. ADJOURNMENT

INDIVIDUALS REQUIRING SPECIAL ACCOMMODATIONS TO ALLOW ACCESS OR PARTICIPATION AT THIS MEETING ARE ASKED TO NOTIFY STEPHANIE HALFORD, TITLE VI COORDINATOR, AT (701) 746-2660 OF HIS/HER NEEDS FIVE (5) DAYS PRIOR TO THE MEETING. IN ADDITION, MATERIALS FOR THIS MEETING CAN BE PROVIDED IN ALTERNATIVE FORMATS: LARGE PRINT, BRAILLE, CASSETTE TAPE, OR ON COMPUTER DISK FOR PEOPLE WITH DISABILITIES OR WITH LIMITED ENGLISH PROFICIENCY (LEP) BY CONTACTING THE TITLE VI COORDINATOR AT (701) 746-2660

**PROCEEDINGS OF THE  
TECHNICAL ADVISORY COMMITTEE  
Wednesday, June 14<sup>th</sup>, 2023**

**CALL TO ORDER**

Stephanie Halford, Chairman, called the June 14<sup>th</sup>, 2023, meeting of the MPO Technical Advisory Committee to order at 1:35 p.m.

**CALL OF ROLL**

On a Call of Roll the following member(s) were present: Wayne Zacher, NDDOT-Local Government; Ryan Brooks, Grand Forks Planning; Nancy Ellis, East Grand Forks Planning; Jon Mason, MnDOT-District 2; David Kuharenko, Grand Forks Engineering; Steve Emery, East Grand Forks Engineer; and George Palo, NDDOT-Local District.

Absent: Brad Bail, Troy Schroeder, Nick West, Tom Ford, Ryan Riesinger, Dale Bergman, Rich Sanders, Michael Johnson, Lane Magnuson, Nels Christianson, Christian Danielson, and Jason Peterson.

Guest(s) present: Diomo Motuba, ATAC; Jason Carbee, HDR Engineering, John Cock, Bolton and Menk; Raymond Eliot, Bolton and Menk; and Kristen Sperry, FHWA Bismarck; Voni Vegar, MnDOT; Erika Shepard, MnDOT, Barry Wilfahrt, GF/EGF Chamber.

Staff: Stephanie Halford, GF/EGF MPO Executive Director; Teri Kouba, GF/EGF MPO Senior Planner; and Peggy McNelis, GF/EGF MPO Office Manager.

**DETERMINATION OF A QUORUM**

Halford declared a quorum was present.

**MATTER OF APPROVAL OF THE MAY 10, 2023, MINUTES OF THE TECHNICAL ADVISORY COMMITTEE**

***MOVED BY BROOKS, SECONDED BY ELLIS, TO APPROVE THE MAY 10<sup>TH</sup>, 2023, MINUTES OF THE TECHNICAL ADVISORY COMMITTEE, AS PRESENTED.***

***MOTION CARRIED UNANIMOUSLY.***

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**ACTION ITEMS:**

**MATTER OF PRELIMINARY APPROVAL OF THE BIKE/PEDESTRIAN PLAN  
UPDATE**

Halford said that on-line we do have John Cock and Raymond Eliot from Bolton-Menk to give you an overview of where we are at.

Halford commented that just prior to this meeting the plan was presented to the East Grand Forks Planning and Zoning Commission, they did approve it. She added that there weren't really any questions, it was more what we see most times when we go through these approval processes, it kind of stirs up that conversation of what a plan is, which is good, so there was a lot of good discussion.

Halford stated that the plan was also presented to the Grand Forks Planning and Zoning Commission last week, and there was a lot of good discussion there as well however it was a long meeting, so they were good with what has been done with the plan, and they approved it pretty quickly.

Halford said that John and Raymond have a little presentation they would like to give us today.

Cock referred to a power point presentation (a copy of which is included in the file and available upon request) and gave a brief overview of the plan and the process of what is in it.

Cock referred to the presentation and said that he would start with the vision and some of the current conditions and some of the public input they received, the recommendations.

Cock commented that as part of this process they had a Steering Committee made up of different agencies and groups from the region, some of you here today were part of that, the cities, the DOTs, FHWA, etc. He said that based on the feedback from those individuals as well as the public they came up with this vision statement and these guiding principles, which are sort of the overarching direction for the plan and the recommendations and the performance measures, etc.

Cock stated that being a community where year-round walking and biking are safe, comfortable, convenient, common and enjoyable for people of all ages and abilities; they word smith that a lot and have some guiding principles to go with it, which they detail in the plan, but the big headings are safety, improving mobility, increasing walking and biking rates, replace private vehicle trips, focus on community needs and investing wisely.

Cock commented that the plan began with looking at demographics, and how people are traveling in the region today. He said that the good news is that in this region there are plenty of short trips that could be replaced, from time to time with biking, walking and transit.

Cock said that other demographic features from our review, both of field reviews and looking at demographic data, not unlike most American communities, there are many people living without

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vehicles, or having access or ability to drive, or limited access, including folks that are either physically unable or due to age not able drive, so we have to think about all of those communities, as well as sort of the range of different types of cyclists from those that are comfortable sharing the road with cars to folks that are more comfortable on a quiet street or off-street type of facility. He pointed out that in their surveys about 40% of the folks said that they would do more walking and biking if they felt the network were safer.

Cock stated that they looked at the safety trends for the previous five years and you can see the reported crashes on the map. He said that crash density and location was one of the factors they used in determining their network recommendations as well as their prioritization.

Cock said that they also had very extensive and very positive public engagement, public feedback with lots of different ways for people to get involved; everything from a committee and public ride to look at some of the existing facilities to on-line and in-person engagement, multiple rounds of engagement in person on each side of the river, as well as some detailed engagement around some of the priority corridors, which we will talk about more in a moment.

Cock reported that what they heard from the public, from the survey, a majority of folks want to invest more in walking and biking in the region and would like to live in walkable and bikeable neighborhoods. He said that nearly half of the folks thought that the Grand Forks area was pretty good for biking, but improvements could still be made. He stated that some of the big issues were east/west connections, bridges across the river, more signage and wayfinding in East Grand Forks today, pavement conditions, railroad crossings, and then making sure that people are following the rules of the road. He said that some other things they heard at the open houses, and again these are big schematic arenas, and they have more of the details identified in the plan, but general safety, congestion, making sure funds are spent responsibly, making sure the network is well planned and connected, that we are planning for future growth in the region, and that we are prioritizing projects and investments wisely with public input reflected.

Cock said that they did do some additional public input around the five priority corridors that they identified through the prioritization process and public input and they got some very good feedback at those meetings that was focused on individual corridors. He stated that he thinks one of the big highlights from those meetings is that additional study and additional public input will be needed to gain some consensus on what kinds of facilities should be implemented on those corridors, given some of the tradeoffs that will need to be made.

Cock stated that as part of the technical analysis they looked at a lot of demographics and analysis of existing conditions. He pointed out that the slides show just a few of the things they looked at in terms of demand for walking and bicycling facilities and where people are that need to walk and bike as well as looking at the existing network and how it serves or what the level of comfort is that might be reflected for people who are walking and biking today in the region.

Cock commented that, again, this is an update to the previous plan, so they started with network recommendations from the last plan. He said that they used public input and input from the committee, and their own analysis to develop the long-range network recommendations map that

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is shown on the slide. He said that solid lines are existing facilities, pink lines are multi-use paths, the dashed lines are the recommended network, but overall, 130 miles of various types of walking and biking improvements are shown as well as some crossing improvements, although those are sort of “to be determined” in terms of what the nature of those improvements would be.

Cock said that the recommendations included everything from crossing improvements, filling sidewalk gaps, the full range of bicycling facilities for on-street as well as shared use and bicycling facilities that would be separated from the roadway corridors.

Cock stated that the plan includes design guidelines that can be used in designing facilities, but also used in helping to provide direction to private sector partners who may be developing pieces of the network. He added that they also had a sub-committee of the steering committee, and some additional representatives who looked at recommendations for safe routes to school around the elementary schools in the region. He said that they developed network maps for each of the schools as well as some non-infrastructure recommendations that would apply to all the schools as well.

Cock said that they took all of their analysis, they took the public input and the steering committee input and put it together to develop a list of prioritization factors, and then they used a GIS analysis to come up with, out of the universe of all of the range of project types, which were the highest scoring on these features for the region and the result was the list shown on the map. He said that the lines in the darker purple are the higher priority needs, and you can see a lot of east/west connections on the Grand Forks side and a mixture of connections on the East Grand Forks side, in terms of prioritization, and then from that and from the public input they came up with a list of five projects, priority corridors, to look at further, in terms of some very preliminary feasibility, and those are the corridors they took to the public to get additional feedback on.

Cock stated that they also included in the plan some high-level planning cost estimates for facility design, construction, and maintenance, which communities and partners can use for developing capital plans. He said that they also developed a set of recommendations that are non-infrastructure in nature in the areas of education, encouragement, equity, and evaluation, which is another way to say additional planning and evaluation of the recommendations in this plan. He stated that they had policy recommendations as well as recommendations for each of the communities to adjust their regulatory standards for walking and biking in new development, so these are all things that will be complimentary to the infrastructure investments and to help create a culture of walking and biking in the region and are based on some of the criteria in the Walk Friendly and Bike Friendly community applications.

Cock said that that is the high-level overview, and he thinks that everyone has been presented with a copy of the draft plan, but they would be pleased to take any questions or comments you may have at this time.

Kuharenko said that he has a couple of questions. He said that when he was going through the appendices of the draft plan, he ended up looking at Appendix G, and at the tail end there is a cover sheet for a Sub-Appendix A, regarding the Grandfather Clause, but he didn't see anything

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after that when he looked at the on-line version, are you aware if there is supposed to be something back there or can you tell him any other details on that. Eliot responded that that was going to include a copy of the Grand Forks Grandfather Clause as means of listing out where areas are exempt from sidewalks, and there just must have been an issue of version history or stitching it together so he can get updated version of that out later today.

Kuharenko said that the other comment coming from his department was on Pages 60 and 61, for Tables 2 and 3, which calls out the priority projects for Grand Forks and East Grand Forks, and whether it would be possible to add a column with the approximate cost estimates using the tables you developed on your cost per foot or cost per mile for each of those priority projects. Cock responded that they absolutely could do that.

Cock commented that he would also like to acknowledge that Dave has contributed some really really good input on this plan, and it would not be what it is today without the input, the very detailed, thoughtful, thorough input that he has provided, and many other stakeholders as well, they had a great steering committee, but he wanted to give Dave special kudos.

Halford reported that, just so everyone is up-to-date, recently she gave an MPO 101 update to the full councils on both sides, and that was something she really highlighted, that when we come forward with these plans, it isn't just coming from the MPO, but it is your staff that you've hired that have been part of these conversations, it has been the federal partners and the DOTS that have come forward, all working together so that when we do get these comments back they are very helpful and make the plans that much better.

***MOVED BY KUHARENKO, SECONDED BY BROOKS, TO APPROVE FORWARDING A RECOMMENDATION TO THE MPO EXECUTIVE POLICY BOARD THAT THEY GIVE PRELIMINARY APPROVAL TO THE FINAL DRAFT BICYCLE/PEDESTRIAN PLAN SUBJECT TO INCLUSION OF CHANGES DISCUSSED.***

***Voting Aye: Brooks, Zacher, Ellis, Mason, Emery, Kuharenko, and Palo.***

***Voting Nay: None.***

***Abstaining: None.***

***Absent: Schroeder, Sanders, West, Ford, Riesinger, Bergman, Danielson, Bail, Peterson, Johnson, Christianson, and Magnuson.***

**MATTER OF APPROVAL OF THE 2023-2026 TIP AMENDMENT #4**

Kouba reported that we recently received a request for an update of our T.I.P. from MnDOT. She said that it is for a cost change between the project that we have listed in our T.I.P. and the project that is currently needed to, what is available.

Kouba stated that they are reducing the cost mostly because part of the cost estimate included parts of the project that have already been done, so they are eliminating those elements and just moving forward with the signal replacement, so it is a reduced cost that is more than 25% change so we are just looking for the approval to amend the T.I.P.

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Kouba said that we have not had any public input, and there isn't anyone from the public currently here, so if anyone has any questions feel free to ask them now, otherwise we are looking for approval of the T.I.P. Amendment #4.

Kuharenko asked what year this project is programmed in. Kouba responded that she believes it is in 2024, but they will be letting bids in 2023.

***MOVED BY KUHARENKO, SECONDED BY BROOKS, TO APPROVE FORWARDING A RECOMMENDATION TO THE MPO EXECUTIVE POLICY BOARD THAT THEY APPROVE THE 2023-2026 T.I.P. AMENDMENT #4, AS PRESENTED.***

***Voting Aye: Brooks, Zacher, Ellis, Mason, Emery, Kuharenko, and Palo.***

***Voting Nay: None.***

***Abstaining: None.***

***Absent: Schroeder, Sanders, West, Ford, Riesinger, Bergman, Danielson, Bail, Peterson, Johnson, Christianson, and Magnuson.***

**NON-ACTION ITEMS:**

**MATTER OF PROTECT GRANT SOLICITATION**

Kouba reported that Minnesota has come up with, has looked at how they are going to do a formula for dividing out their formula funds throughout their districts and District 2 has presented what they are looking at and their scoring and their application process for these funds.

Kouba stated that there is \$500,000 available in 2024 and in 2025, and they are looking for applications for both years. She said that the funding split will be 80% Federal and 20% Local match.

Kouba said that it is kind of a joint application, and we have the same deadline as the ATPs, so the MPO needs to have applications from within the MPO study area to the ATP by August 18<sup>th</sup>. She stated that this is just the solicitation of projects and is just on the Minnesota side, so we will be letting our Executive Policy Board now about this solicitation as well, and if you need any assistance with the application, please contact herself, Jon Mason or Troy Schroeder with MnDOT.

Information only.

**MATTER OF UPDATE ON STREET/HIGHWAY PLAN WITH MODELING**

Kouba reported that, as you know, we are basically looking at where we are at in this process, we look at this plan every five years. She stated that she knows that most of the committee has had a lot of information already about where we are at but now that we recently received our traffic demand modeling data, we have some additional information that Jason Carbee, with HDR, will share with us today.



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Carbee said that today we are going to talk about progress and, we have spoken a few times with you about this, but essentially they have really worked through the goals and objectives, identified kind of framework and approach for how we are going to tackle the Street and Highway Plan and the overall Metropolitan Transportation Plan, but really focused on reviewing previous plans, taking the data that is available not only from other plans but from other data sources and really going through it and kind of identifying where we are with the system today.

Carbee stated that they looked at federal guidance, making sure, again this all about how we prioritize some of the federal spending in the MPO area and really focusing on doing that federally compliantly, and then we did have the public meeting in November, and again they have probably given a quick update on this, but they had a separate stakeholder discussion with a lot of different interests in the region and then they had a public open house at the East Grand Forks Library, and the things they really heard from both those groups is that this plan really ought to focus on safety, efficiency and reliability, having good connections in the metro area, and then kind of reinforcing what we just heard on the action item, reinforcing how the street plan can really get bicycle and pedestrian connections worked into the whole system.

Carbee said that he won't go into a whole lot of detail on each of the goals, but we do have five goal areas, and with each of those goal areas they worked on measurable objectives, and essentially they are a combination of things that were identified locally through discussions with the stakeholders and the public and with some of the existing plans in the area, and also making sure we are checking all the boxes on the federal performance measures that we need to report to each DOT, but again the five goal areas are efficient and reliable, safe, connected and accessible, making sure we take care of the assets we currently have so preserve and maintain, and then consistent with the last item, talking about the Protect funding, making sure we have a sustainable and resilient system. He added that, again, there are objectives associated with each of those, and they will help us identify which of the strategies and projects that come out of the next phase of the study, and how we are going to rank them.

Carbee stated that, again we have talked about a lot of this, the current safety, we looked at five years of crash records and identified some of those hot spots, how the system is operating, reliability and traffic operations congestion, pavement and bridge, looking at connectivity of the network, and the environmental baseline, kind of where we are at with some of the floodplains, wetlands, and things like that.

Carbee said that in draft form what they are working through is the future conditions, and next Diomo will discuss the travel model, but that is the basis for some of the preliminary baseline traffic forecasts they have started to put together.

Kouba commented that since Diomo has finished the traffic model we wanted to make sure we forwarded it to the committee, to bring it forward so he can explain what he saw and what went into the model itself.

Motuba, A.T.A.C., was present for a brief presentation on the Grand Forks-East Grand Forks 2020 Travel Demand Model.

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Motuba reported that he has been doing modeling work, so developing travel demand models, for the past twenty years, and every five years we update it. He said that this time was a bit different because of COVID, so we need to take that into consideration, so normally the base year would have been 2020 but we are using 2021 as the base year.

Motuba referred to a slide and stated that it is an outline of what he is going to talk about, and he likes to talk, he is a teacher, so he will try to keep it short, he has only ten minutes.

Motuba said that he will talk about how we updated the process, what goes into the model, how they calibrated and validated the model.

Motuba stated that the model is a computer simulation model that tries to replicate real world travel, how many trips people are making, where they are going, what model choices, what choices they are making when they are making their route, and it also tries to look at how congestion is considered when making those trips. He said that the output is a model that shows you the amount of traffic using our functionally classified roadways in the area, and so to update that model we use socioeconomic data, the number of households, how many people in a household, network data, employment data, etc, so we do a trip generation where we go in and say how many trips are generated on average per household per day, and then we look at where the trips go, so on average where do trips from one zone go for maybe work, most people have a fixed area where they go to work, and then we do a model to see what modes of travel are people using, are they riding bikes, driving a car, taking the bus, etc.; in the model we don't explicitly include walk or bike, and then they do a traffic assignment, which is how many trips and what routes are they using to go from their origin to their destination and finally they do a calibration and validation, which is to input the parameters that go into the simulation model and validation is comparing it to real world data and trying to figure out things like traffic counts, vehicle miles traveled, and things like that.

Motuba said that for the input that goes into the model they developed a model that reflects 2021 jobs and households, again the reason being that 2020 was a COVID year, and if they had tried to calibrate a model to 2020, they would not get the right amount of traffic because of all the things that were going on that year. He added that they look at school enrollments, household sizes, UND campus students, airport enplanements, and they also look at special generators like malls, the hospital, and they also found out that in our area Walmart generates more traffic compared to other big box stores. He said that they also look at ADT traffic counts that are done within the region, and then they updated the network to reflect 2021 conditions.

Motuba stated that this is what goes into the model, and there are four main steps, they do a model that is called a "trip based" model. He added that there is another model, an "activity based" model, that offers more in-depth information, but they don't do that model, it would take a lot of additional data and a lot of time and cost, but from what they have seen it is a model that can help with more policy questions, for example things that have to do with environmental justice and things like that, but for our purposes for transportation planning it might not be as helpful, and from what they have seen from conferences they don't necessarily improve the predictability of a base model.

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Motuba reported that the first step, Trip Generations, is the number of trips that each household will produce on average, and they use trips rates they look at nationally, regionally, and from North Dakota. He said that that is what they used for this, and they also adjust them to maybe reflect the total trips that originated in Grand Forks, to reflect the traffic that is assigned on the roadway network so they do a comprehensive look into that. He added that the only regional model that he used where a survey has been done has been from Fargo/Moorehead so they looked at that and then compared it nationally, and this will be a good match for the MPO because it cost quite a bit of money, and he knows that when Fargo did it in 2012 they put out an RFP for about \$300,000 and they had to increase that amount before they could get a consultant to do it.

Motuba stated that they look at three main trip purposes, work from home, shopping and other non-work purposes from home, and trips that don't originate from home. He said that after they generate those trips they distribute them and then they look at what mode they are using and then they assign it to the network, so those are the steps they are using, and this year is just an update process, but they go through different things, testing the model, checking the model to see if it is representing ground truths, and so they do adjust the model several times before they get the final model.

Motuba commented that for each of the steps they have different outcomes; the first steps they develop trips at each zone that will produce and attract. He added that they use North Dakota and Minnesota averages and compare them to national rates and then they are compared to MPO models or cities of similar sizes, because we don't have local trip generation data but even if we did have it we would still would be adjusting them, and we also evaluate how COVID has changed the number of trips we are making, and how it will continue to impact traffic. He said that trips were down about 13% in 2021 compared to pre-covid so they adjusted for that. He referred to a slide and pointed out that, for example when they looked at the model from 2015 compared to 2021, this is what they see, and it was also shown by the traffic data that A.T.A.C. collected for Grand Forks. He said that they saw an overall reduction between 12% and 15% in traffic for 2021, so the important question is will this stay the same or will it increase, we are still in that phase where we aren't sure where we are going to land.

Motuba stated that going into how we validate and calibrate the model, they adjust some of the parameters, for example trip generation equations, and also they compare to real world observed data, he is just going to mention a few of them, there is going to be a report that is going to have all of this in it; they compare vehicle mile trips (VMT – vehicle miles traveled) and that is coming from NDDOT; they look at street light crossings, so the amount of trips that are crossing between Grand Forks and East Grand Forks across the river and crossing I-29. He added that previously they used data they got from StreetLight, but he thinks that with the new data source they have gotten they should be able to maybe go back and just look at how the model was matching to the street and then also the traffic counts too.

Motuba referred to a slide showing Model VMT compared to observed VMT for Grand Forks and stated that it shows what they got out of the model compared to VMT for Grand Forks from

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the NDDOT and from MnDOT too, but this is the one from the NDDOT. He stated that they knew that the model was going to have some differences, and they know that on a daily basis any route or road that you take is going to have some variance, but they want to be below or above the second variant, and for all the different functional classification roadways we meet the criteria, the worst performing were the collectors and local streets, which is expected because of the low traffic using those roadways. He stated that for MnDOT, the data provided for you is for U.S. Highways, MN Highways, Municipal State Aid Streets, and Municipal Streets, and they looked at those streets and see whether or not we are generating the same amount of VMT, and for this the Minnesota Highway was the worst performing, at -9.30%, but we were still within where we wanted to be, within 10%.

Motuba referred to a slide showing screenline comparisons. He explained that screenlines are just barriers for travel, like the Red River, BNSF Railroad, I-29. He stated that they wanted to see traffic, the amount of traffic crossing those barriers for traffic, whether we are presenting those numbers, and for the most part we did; BNSF Railroad will be an interesting one, with the new overpass that is going to be built, we will need to check it again since it was just approved, and see how it gets included in the 2040 model.

Motuba stated that they feel that they calibrated the model reasonably. He referred to maps showing how traffic is coming and going at different locations and went over them briefly.

Motuba said that they also compared trip length frequency distribution (shown on the map). He stated that this is the number of trips within the MPO area that occur within a certain amount of time, so how many trips do we have between 10 and 15 minutes, how many trips do we have that are between 15 and 20 minutes, and so on, and they don't expect an exact match, but observed trips is shown in blue and modeled trips are shown in red, so now the trips we are seeing from national data bases, in terms of what Grand Forks is producing is about 12.5 minutes and when they compared them to the model they were quite similar.

Motuba pointed out that they also compared the traffic counts to the model observed volumes and this is pretty much what we want to see, we are going to see some variances, if we had one straight line with all the numbers on the line, if he sees that then he knows there is some cheating going on.

Motuba said that they also compared observed ADT by volume range, so anything greater than 25,000 may be a difference of 500, it isn't that much but if an ADT is less than 1,000 and you have a difference of 500 than that is really a big difference because it is a 50% difference as opposed to maybe a 5% difference. He stated that overall, they saw that the model was replicating what we wanted to see, and they do this just to see that the different volume ranges are doing what we expect them to do. He added that they also do this by functional classification so they can see whether the different functional classes are performing well, sometimes the major might have a have a five mile an hour higher speed compared to a minor roadway and because of the slow condition, most of the traffic will be assigned to a major roadway so we try to make sure that the model is replicating what we found. He said that, again, they aren't going to be 100%, the one that was underperforming was Major Roadways at 75%, so at the end of the

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day they do an adjustment to make sure that the 75% becomes 100%, they do some adjustments to these numbers so that in the future when they do the model it will take that into account.

Motuba commented that the next steps they, the MPO has obtained Urban SDK, and Teri can talk to that, but he has looked at it, it is really cool data, so they will be looking at some of that data and see how we can incorporate it with the model to see what it looks like. He said that they will then provide final documentation and the model to the MPO and also participate in developing scenario analysis for the Metropolitan Transportation Plan.

**QUESTIONS:**

Kuharenko stated that he has a couple of questions regarding the Model VMT. He referred to a slide showing Model VMT Compared to Observed VMT and said that we've got the accepted deviations, and they vary anywhere from 5% to 15%; can you explain a little bit more as to kind of the origin of how an acceptable deviation, in the far-right column, how that is determined. Motuba responded that these are determined by functional classification, what that functional classification is, and so this is overall for all of the highways, so we are looking at the functional classification. He said that, unfortunately it isn't apples to apples, Minnesota reports it differently than how North Dakota reports it, so what they have done is, in the past they looked at how a VMT is changing from the data that they collected over at A.T.A.C., how does that VMT vary on a day to day basis, how does it vary on a year to year basis and they found that on average, for some of the streets, it is about plus or minus 10%, also he can put out that there is a report that FHWA put out that says that when you do modeling this is what is expected or this is what is acceptable from a modeling point, so there are several different sources, and he could read it but it will be in the report.

Kuharenko said that, just one other piece of clarification; he referred to a slide showing screenline comparisons and stated that you said before that this is crossing these various locations, one of his initial questions was when first reading through this packet, was that I-29 has a 10% accepted deviation here, but in previous slides the accepted deviation for an interstate is 5%, but this is a completely different data point that you are looking at, correct. Motumba responded that this is totally different, it is crossing across I-29, not on I-29. Kuharenko said that the other question he has on this slide in particular is, looking at I-29 and seeing that there is a 10% difference, and that accepted deviation is plus or minus 10% it kind of looks like it is right on the line, do you have any concerns regarding that particular data point. Motumba responded that he does have some concerns and, referring to the maps, stated that that is why he did the Traffic Crossing I-94 on University Avenue map, because most of that traffic is what is crossing on University Avenue. He referred back to the screenline comparison table and pointed out that there is a 7,000 difference, though he thinks it is one that they are going to go in and look at again and try to figure out where the traffic is going to, but he thinks mostly the contributors are the Walmart on the west side of town and also US Highway 2 West, that is where the traffic is going, so that Walmart is attracting quite a bit of traffic so they will probably have to go back into the model and look at the attraction trips are for that area.

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Kouba commented that basically all of that information has given us some additional information; it gives us a lot of information as to where we want to go in the future. She referred to the slides showing household and employment information and commented that, just for reference, this is kind of what the MPO was giving Diomo for that household as well as the employment information. She continued with the slide presentation and stated that this is the first flush of information that we've gotten from the model itself.

Carbee referred to the slide presentation and pointed out that we are seeing a lot of household growth on the south side of Grand Forks, and some growth on the north side of East Grand Forks. He said that employment is kind of spread-out all-over kind of that western periphery, and in the north and in the south, so you can see that that leads to this, which is overall forecasted growth, and you can see the darkest and widest lines are over 25,000 ADT. He added that you can see today that that amount of ADT really starts to stretch further to the south and a little bit further to the west too, particularly on the Grand Forks side and so here is a map/picture of what they call a Delta map, it is basically the difference between the base year of 2021 and future year 2050, and you can see we have a lot of places where we are growing over 10,000 average daily traffic, including that 47<sup>th</sup> Avenue Interchange and the 47<sup>th</sup> Avenue Corridor, but you know all the way down to Merrifield Road we are seeing some growth and traffic, and that really matches up actually really well with what we showed for that growth concept on the land use side, and this doesn't show up great at this scale, but they are starting to see a lot of congestion on the current two-way rural sections of Columbia and Washington, south of 47<sup>th</sup>. He said that they continue to see issues pretty much all the way down to Merrifield. He added that they are assuming that 47<sup>th</sup> Avenue South is just a two-lane road to start with the new interchange; they are seeing volumes of about 20,000 so at some point it will probably need to be a four lane.

Carbee stated that in the more mature parts of the city they are starting to see issues, pretty much from Washington over to the East Grand Forks side, DeMers has got some operational issues and he thinks that we see some of that today already, but even Columbia and Washington we start seeing volume to capacity ratios indicating that we will have some peak hour congestion, and then we see, again to the west, on Gateway and DeMers we also start to see some of those issues where we have four lanes on Gateway and two and three lanes on that section of DeMers so there may be some potential future widenings. He stated that one of the things they are transitioning to after this is kind of developing, after our public meeting coming up next week, is to start coming up with a project list and talking about priorities, and so we will probably have two different sets of options for the mature corridors like Gateway, Washington, Columbia, he knows there have been historical plans for six lanes on some of those; right-of-way constraints, frontage roads, that is going to be pretty impactful; do we talk about maybe some management strategies, could be combinations of signals, other strategies, he knows there has been a long discussion of the bridge crossing, obviously, so a southern bridge crossing or a northern bridge crossing could help alleviate some of that congestion to those corridors, so those are the types of alternatives that we will start looking at, and they will be looking for some input on this in the short-term.

Kouba referred to said that in the Belmont area, and Cherry, as well as 24<sup>th</sup>, 17<sup>th</sup>, 13<sup>th</sup>, you see a lot of increase in traffic, and those are all roads that are going to be connected to traveling back and forth, making traffic decisions like should I go on DeMers to get to Washington, or should I

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go down Belmont to get to Washington or even further south to 32<sup>nd</sup>, and that is one of the reasons why when we present information to the public there will be a strategy of using a bridge as mitigating some of those issues. Carbee added that that will be one of the alternatives in the plan to discuss.

Carbee stated that looking at Diomo's presentation again, it is kind of an outside perspective and all the validation statistics looked kind of like a good model, and, again, looking at what we gave it for land use and everything else this is what I expect to see, and again, travel models are tools, and it is best estimates and ability to look at options and make decisions, and what he is seeing so far seems to make sense and can help support them through their alternatives analysis.

Carbee referred to the 2050 Street and Highway Plan Schedule and stated that the public open house will be on Wednesday, July 21<sup>st</sup> from 4:00 p.m. to 6:00 p.m. at the Empire. He added that for the next couple of months they will be working through the alternatives analysis; we talked about those objectives, what they will do is use those objectives to help them work through what strategies make the most sense. He said that they have talked to both DOTs about funding, so they will kind of wrap up the financial plan by late-summer, and in August and September they will start developing that framework for recommendations, go to an open house, and then start working on the draft plan this fall with the adoption at the end of the year.

Kouba said that with the alternatives, the biggest question is will we be able to bring some of that information to the Technical Advisory Committee to get eyes on it by our July meetings. Carbee responded that they will start developing project lists and then we will see how quick Diomo can turn around travel model runs, he hopes we can talk about that in more substance next month, but they are going to wait for input next week and then his goal will be to have some project lists and then we can talk about alternatives by the end of the month. Kouba said that we will be running pretty fast the next couple of months.

**MATTER OF NDDOT CONTRACT AMENDMENT**

Halford reported that this is just an amendment to the contract so instead of a two-year contract they want to move to a year-by-year contract. She said that we currently just started the first year of a two-year contract, FY2023 and FY2024, but the amended contract will be just for FY2023 and then closer to the end of the year we will start looking at FY2024.

Halford stated that this will go to the MPO Executive Policy Board for a formal approval process, but she just wanted to give the Technical Advisory Committee a head up as well.

Kuharenko asked, we are still on the two-year Unified Planning Work Program, DOT is shifting to a one-year, has there been any thought as to, kind of similar to what we have for our T.I.P. where we are looking out four or five years, instead of having a two-year plan we have a four-year plan, or something along those lines. Halford responded that we will keep our work program as two years and we will probably, her thought is a transition where instead of just looking at it every two years and doing amendments, after a year as gone by, just like we do for our T.I.P., so we will continue to do that with our work program, she has no intention of

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changing that, that will be at least two-year increments, but probably more like our T.I.P. model, this is just our contract that is changing to a year. She added that on the Minnesota side we are currently doing it year by year, so this is nothing new to us, so as of now it will be the same.

**MATTER OF ATAC CONTRACT AMENDMENT**

Halford reported that this is a similar item to which we would normally just bring to our Executive Policy Board but, again, she wanted the Technical Advisory Committee to be aware of it.

Halford explained that with the delay for the modeling and getting that going, we made an amendment to this contract to extend it to the beginning of the year, but we really should have extended it to the end of year. She said that we want Diomo to be part of the conversations until we are done with the Street and Highway Plan, so really this is just an amendment to the contract date as well, and the cost is not changing, and she wanted the Technical Advisory Committee to be aware of that. She stated that the current end date has ended, and we want to extend it to the end of the year.

Kuharenko said that he has a question that isn't exactly related to the amendment, but more to the contract that we have with A.T.A.C. He stated that he knows that A.T.A.C. ends up doing a lot of our traffic signals and incorporating them into the traffic counting program, and knows we have seen that in the past, so just at a couple of locations he just wanted to make sure we get on or radar.

Kuharenko stated that there are a couple of signals in town that we should have connected with fiber now, that weren't previously; there is one at the intersection of South 20<sup>th</sup> Street and 47<sup>th</sup> Avenue South, he wants to say that that was installed a year or two ago, and they have a signal at South 20<sup>th</sup> Street and 24<sup>th</sup> Avenue South, that he believes was connected to fiber also about two years ago, and then they have two signals that will be coming on line, one of them is part of the South Washington Reconstruction Project, where they are reconstructing Washington to a five lane section from the south end drain way down to 57<sup>th</sup>, and as part of that they are going to be installing a new traffic signal at South Washington and 55<sup>th</sup> Avenue South, that will probably be installed this winter he would guess just because of lead times, but that is one to get on the radar, and then as part of their Urban Signal Rehabilitation Program Project they have coming up this year, he believes they will also be replacing the signal at South 20<sup>th</sup> Street and 17<sup>th</sup> Avenue South, that signal is currently already being counted so he doesn't know if that is just a matter of recalibration, but those are just a couple of signals that he knows are either not currently on the counting program, or might be getting tweaked in the future, so just a couple of things to keep on the radar.



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**OTHER BUSINESS**

A. 2022/2023 Annual Work Program Project Update

- 1) Bicycle/Pedestrian Element Update: Halford said that she doesn't need to go through this item as we already discussed it, but she would like to mention that we are in the preliminary approval process and should be completed with that by the end of June, and then we will begin the final approval process in July, so hopefully we will have this wrapped up in August.
- 2) Street/Highway Element Update: Halford said that, again, she doesn't need to go through this item as we already discussed it.
- 3) Aerial Imagery – Halford reported that this is moving along, and they are expecting to get the final information to us at the beginning of August.

B. MPO Updates

- 1) MPO 2023 Audit – Halford reported that we did have an audit performed in May, and the Final Audit Report will be presented to the MPO Executive Policy Board at their meeting next Wednesday, but we just wanted the Technical Advisory Committee to know that the audit went very well.
- 2) MPO 101 Update – Halford reported that she gave an MPO 101 Update to both City Councils. She said that they both appreciated what we are doing and there were no big questions, just that we are doing great work, which is always good to hear, sometimes it is nice to get a little bit of feedback.
- 3) Mid-Year Review – Halford reported that we will be having our Mid-Year Review on June 26<sup>th</sup>, on Monday. She said that the review is done with some of our Federal and State partners, on-line and in the room, coming together for half a day, telling them how well we've been doing. She explained that it is nice to have that open conversation to kind of go over some things.
- 4) Safe Street For All (SS4A) Grant – Halford reported that she has been having conversations with Kristen and Sandy and they have gone back and forth with a draft agreement; where it is sitting right now is where she just needs to schedule a meeting with David and Nancy and get their eyes on it and work out the bugs and get it signed and maybe get an RFP out late summer early fall.
- 5) Transportation Planner Position – Halford reported that we have posted for a Transportation Planner/Senior Planner. She stated that we received around eight applicants, so she will be going through those to start the first round of interviews, hopefully there are a few in there that we can interview, and even

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better maybe hire one from that group, so if you know anyone that might be interested and might be a good fit, push them our way.

- 6) Bridge Update – Halford reported that we hadn’t heard from the consultants for a while, but either today or yesterday she got an email from them, and they did mention that, hey we are still here, they are reviewing documents and doing some funding research and are looking at setting up a meeting with both DOTs, having us set up that meeting. She added that they are also excited to be using the Urban SDK Software as well, so we’ll give them access to that.

Kouba commented that she knows that the consultants have requested information from Diomo as well.

C. Agency Updates

- 1) Kuharenko reported that the City of Grand Forks received funding for the 42<sup>nd</sup> Street Underpass last Monday. Halford said that that is a big win for the City of Grand Forks.

**ADJOURNMENT**

***MOVED BY ELLIS, SECONDED BY KUHARENKO, TO ADJOURN THE JUNE 14<sup>TH</sup>, 2023 MEETING OF THE TECHNICAL ADVISORY COMMITTEE AT 2:37 P.M.***

***MOTION CARRIED UNANIMOUSLY.***

Respectfully submitted by,

Peggy McNelis, Office Manager



**MPO Staff Report**  
**Technical Advisory Committee:**  
July 12, 2023  
**MPO Executive Board:**  
July 19, 2023

**STAFF RECOMMENDED ACTION: The approval of 2023 Self-Certification to the MPO Executive Board,**

**TAC RECOMMENDED ACTION:**

Matter of the 2023 Self Certification.

**Background:**

Annually, the MPO, working in cooperation with the State DOTs adopts a self- certification resolution. The purpose of the self-certification is to have the MPOs and State DOTs confirm to the USDOT that the requirements imposed upon the metropolitan planning process are being fulfilled. The resolution contains the relevant section of US Code and Federal Regulations being self-certified. The requirements are that the self-certification be included as an appendix to the TIP.

**Findings and Analysis:**

- The MPO and State DOTs need to self-certify that the metropolitan planning process is being fulfilled.
- The attached resolution identifies the various codes and regulations being self-certified.

**Support Materials:**

- Copy of Draft Self-Certification Resolution and supporting documentation.



Grand Forks - East Grand Forks

METROPOLITAN  
PLANNING ORGANIZATION

**The Forks MPO  
Self-Certification**

# Transportation Planning Process Self-Certification Statement

The Grand Forks – East Grand Forks Metropolitan Planning Organization, the Metropolitan Planning Organization for the Grand Forks, North Dakota and East Grand Forks, Minnesota metropolitan region, hereby certifies that it is carrying out a continuing, cooperative, and comprehensive transportation planning process for the region in accordance with the applicable requirements of:

- 23 USC 134 and 49 USC 5303, and 23 CFR Part 450;
- In non-attainment and maintenance areas, sections 174 and 176 (c) and (d) of the Clean Air Act, as amended (42 U.S.C. 7504, 7506 (c) and (d)) and 40 CFR part 93;
- Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d-1) and 49 CFR part 21;
- 49 U.S.C. 5332, prohibiting discrimination based on race, color, creed, national origin, sex, or age in employment or business opportunity;
- Section 1110(e) of the IIJA (Pub. L. 114-58) and 49 CFR part 26 regarding the involvement of Disadvantaged Business Enterprises in USDOT funded planning projects;
- 23 CFR part 230, regarding the implementation of an equal employment opportunity program on Federal and Federal-aid highway construction contracts;
- The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) and 49 CFR parts 27, 37, and 38;
- The Older Americans Act, as amended (42 U.S.C. 6101), prohibiting discrimination on the basis of age in programs or activities receiving Federal financial assistance;
- Section 324 of Title 23 U.S.C. regarding the prohibition of discrimination based on gender; and
- Section 504 of the Rehabilitation Act of 1973 (29 U.S.C. 794) and 49 CFR part 27 regarding discrimination against individuals with disabilities.

Grand Forks-East Grand Forks  
Metropolitan Planning Organization

North Dakota Department of  
Transportation

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Signature

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Signature

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Title

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Title

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Date

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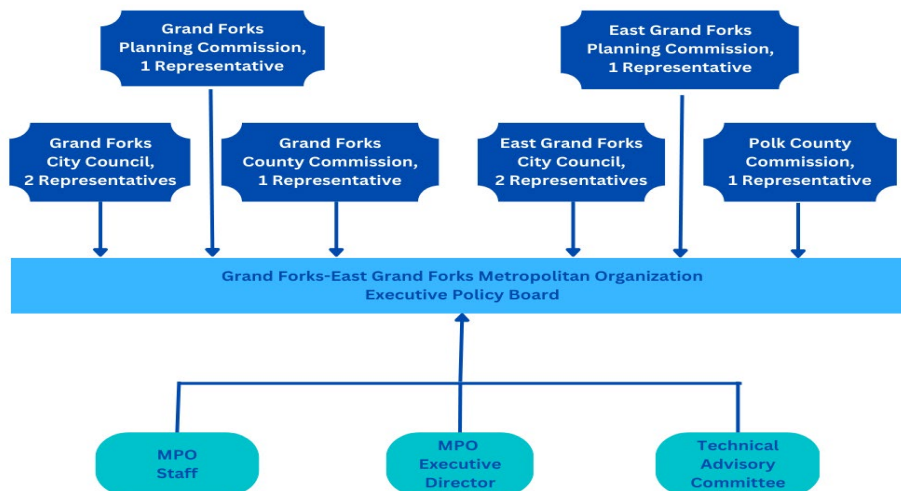
Date

Each year, when the Grand Forks-East Grand Forks Metropolitan Planning Organization (MPO) approves the Transportation Improvement Program, they also certify that the 3-C planning process used in the Grand Forks and East Grand Forks Urbanized Area is following the above federal requirements.

By resolution, the MPO certifies that its 3-C planning process meets the federal requirements through the actions stated below:

### Planning Requirements (23 USC 134 and 49 USC 5303)

The Grand Forks-East Grand Forks MPO has been designated by the Governors of Minnesota and North Dakota as the Metropolitan Planning Organization for the Grand Forks- East Grand Forks urbanized area. The MPO’s Policy Board is comprised of active representatives from four (4) local jurisdictions: Grand Forks, East Grand Forks, Grand Forks County, and Polk County. It is the policy of the MPO that all transportation related planning documents be completed utilizing the 3-C planning process, as indicated in this memorandum and other documents. This policy is annually certified with the T.I.P.



This process is carried out through the implementation of the **Unified Planning Work Program (2023)** and the development and adoption of a fiscally constrained annual **Transportation Improvement Program (2024-27)**, the development and adoption of a fiscally-constrained **Metropolitan Transportation Plan (2018)** every five years, the development of a regional Intelligent Transportation Systems (ITS) technology; all of which are vetted through procedures identified in the **Public Participation Plan (2020)** to assure the general public has access and input into the regional transportation planning efforts. Hard copies of each of the plans and programs are available at the MPO for public review and are also available on the MPO

website: [www.theforksmpto.org](http://www.theforksmpto.org). The MPO also works closely with transportation providers through the region to conduct major investment and corridor feasibility studies which serve to evaluate, refine, and select transportation options for implementation, and ensuring that policies, programs and projects when implemented will result in improved transportation systems within the region.

The MPO works closely with the Grand Forks and East Grand Forks Transit Agencies, collectively Cities Area Transit (CAT) on issues related to public transit and paratransit services. The MPO, along with CAT and with input from the public, develop and maintain a **Transit Development Plan** (TDP, adopted in 2022). The TDP identifies near- and long-term policies and actions items for enhancing transit and paratransit service in the greater Grand Forks – East Grand Forks metropolitan area. The TDP also provides the framework for MPO requirements of **Coordinated Public Transit Human Services Transportation Plan** (included as part of TDP update).

### Statewide Planning

The MPO works closely with the North Dakota and Minnesota Departments of Transportation (NDDOT and MnDOT, respectively) to support the planning, funding, and implementation of statewide improvements. Whenever called upon, planning assistance is provided to assist NDDOT and MnDOT in meeting Statewide Planning requirements. The MPO and the state DOTs share financial information to carry out the fiscal constraint requirements of the planning process.

- A. 49 United States Code 5306 requires the involvement of private transportation providers in the planning and development of public transportation systems.

In the past year the MPO has met these requirements by:

1. Maintaining a Private Sector Participation Procedure related to the involvement of appropriate transportation providers in the 3-C transportation planning process
2. Inviting private transportation providers to opportunities to review and comment on metropolitan transportation studies. Such plans include the Transit Development Plan and Transportation Improvement Program.
3. Liaison, coordination, and direct input on transportation plans is obtained by the private sector by direct membership on the Technical Advisory Committee with one member from the Chamber of Commerce.
4. Selected transit support services have had task forces created to study the specific service and the private operators have participated at those task force meetings. Their comments and views and how they were received are documented in the minutes of the task forces.
5. To date, no complaints from the private sector concerning any facet of our local public transportation efforts have been received

- B. 23 United States Code, Section 134, Metropolitan Planning, (H) (6) Transportation Plan and (J) (4) Transportation Improvement Program, Opportunity for comment, as amended;

Each year, during the implementation of the activities identified in the UPWP, the MPO solicits public participation from citizens of the Cities of Grand Forks and East Grand Forks; Grand Forks and Polk Counties; the staff of North Dakota and Minnesota Departments of Transportation; and other transportation agencies and providers by written notification. Public meetings were held at various times and dates to invite the public to provide input and feedback.

Regarding the TIP, the MPO engages the public several times during the process of developing the TIP through formal public hearings. In May, the draft TIP is promulgated for feedback from the public. In August, the final draft is available prior to adoption. Each hearing notice is placed in a non-legal section, in a two-column advertisement format, with a minimum 10-day advance printing prior to the hearing.

## Clean Air Act Section 174 and 176 (c) and (d)

The State Implementation Plans for Minnesota and North Dakota still do not require any transportation control measures for the Grand Forks-East Grand Forks urbanized area. As part of its multi-modal long range transportation planning efforts, the MPO does calculate the amount of green-house gas emissions estimated by its travel demand model. The MPO has established a performance target to reduce the transportation impact on the environment by 10% below the base year levels by the horizon year of 2045.

## Title VI of the 1964 Civil Rights Act, Section 601

*"No person in the United States shall, on the grounds of race, color or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance."*

The MPO is committed through the development of its plans and programs to ensure that no person on the grounds of age, gender, race, color, sexual orientation, or national origin is excluded from participation in, denied the benefits of, or subject to discrimination under any programs receiving financial assistance (federal or local). The MPO follows its **Title VI and Non-Discrimination Plan** (2022) to meet its obligations under Title VI and in meeting defined Title VI Assurances. The document describes:

- The demographics of the Grand Forks – East Grand Forks Metropolitan Area,
- Environmental Justice areas and Limited English Proficiency populations within the MPO Planning Area Boundary,
- Demographics of MPO staff and Policy Board members, and



- An accomplishment report for both administrative/oversight activities as well as metropolitan transportation planning process activities for the 2022 calendar year.

MPO plans, programs and policies are vetted to assure that minority and low-income populations are not disproportionately affected by actions and outcomes of the plans, programs, and policies. All plans, programs, and policies, including public meeting announcements and agendas, contain the following language:

*“Any individual requiring special accommodations to allow access or participation at this meeting is asked to notify Stephanie Halford, GF-EGF MPO Executive Director at (701)746-2660 of his/her needs five (5) days prior to the meeting. Also, materials can be provided in alternative formats: large print, Braille, cassette tape, or on computer disk for people with disabilities or with Limited English Proficiency (LEP) by contacting the MPO Executive Director at 701-746-2660.”*

The MPO continues to record Title VI efforts for the year, including responding to Title VI complaints, in its annual Title VI report. Title VI compliance documentation includes the following information:

- Since the last self-certification, the MPO has not received, nor been notified of any lawsuits or complaints alleging discrimination.
- The MPO receives Consolidated Planning Grant (CPG) funds, which are transportation planning funds from the Federal Highway Administration and the Federal Transit Administration. All of these funds are secured through the annual adoption of an Annual Unified Work Program. All necessary Civil Rights compliance documents needed to properly obtain these funds have been completed, submitted, and approved.
- No formal civil rights compliance review has been performed on the MPO in the past three years by any level of government. The MPO did update its Title VI documentations and adopted a Limited English Proficiency (LEP) Plan. The MPO has updated its Title VI Report as part of its annual TIP Self-certification. NDDOT also conducted an Audit of the Title VI compliance and found no issues.
- As a one-time submission, the Civil Rights Assurance was previously submitted to FTA in January 1988. Annually, the MPO adopts a State DOT Title VI Standard Assurance as part of its TIP approval.

## Disadvantage Business Enterprises Section [1101(b) of MAP-21 and 49 CFR part 26]

The MPO cooperates with the NDDOT, since it is the lead state agency, in fulfilling its goal of percentage of work. The MPO includes in all its Requests for Proposals a clause that encourages all submittals to include minority and disadvantaged businesses to participate in the response.

Further, the MPO submits a copy of the RFP for the NDDOT Qualifications Based Selection process.

### Equal Employment Opportunity (23 CFR part 230)

Discrimination based on race, color creed, national origin, sex or age in employment business opportunities with The MPO is prohibited. The MPO works with the NDDOT and MnDOT in the implementation of an equal employment opportunity program on federal and federal-aid projects.

### Prohibition of discrimination based on gender (23 USC Section 324)

The MPO maintains a no discrimination policy in our planning efforts, hiring practices or any other activity or product. Such actions include non-discrimination based on a person's gender. The MPO provides the following general caveat with its activities:

*The MPO is committed to ensuring all individuals regardless of race, color, sex, age, national origin, disability, sexual orientation, and income status have access to MPO's programs and services.*

### Discrimination against individuals with disabilities (29 USC 794 Section 504)

The MPO takes pride in its planning efforts and agency operations to be inclusive of all individuals. We provide access for disabled individuals to all meetings and do not discriminate against any individual based on the presence of a disability. The MPO provides the following general caveat with its activities:

Any individual requiring special accommodation to allow access or participation at this meeting is asked to notify Stephanie Halford, GF-EGF MPO Executive Director at (701)746-2660 of his/her needs five (5) days prior to the meeting. Also, materials can be provided in alternative formats: large print, Braille, cassette tape, or on computer disk for people with disabilities or with Limited English Proficiency (LEP) by contacting the MPO Executive Director at 701-746-2660.

### The Older Americans Act, as amended (42 USC 6101)

The MPO is committed through the development of its plans and programs to ensure that no person on the grounds of age, gender, race, color, sexual orientation or national origin is excluded from participation in any programs receiving financial assistance (federal or local). No person will be denied the benefits of or be subject to discrimination in their participation in MPO programs. The MPO subscribes to its **Title VI and Non-Discrimination Plan (2022)** to meet its obligations under Title VI and in meeting defined Title VI Assurances. The MPO plans, programs and policies are vetted to assure that minority and low-income populations are not disproportionately affected by actions and outcomes of the plans, programs, and policies.

The 3-C planning activities of the MPO are sensitive to the needs of the elderly and handicapped persons by:

- Creating a liaison with the elderly and handicapped community and service agencies on the Transportation Improvement Program.
- Specific notification of Transit Development Plan updates and associated activities and public meetings.
- A Section 504 Handicapped Transportation Services Program for Grand Forks and East Grand Forks was adopted in December 1987.

Additional opportunities take place during each City's process to approve projects and plans, which are submitted to the MPO for consideration.

## Provisions of the Americans with Disabilities Act

The MPO does include a statement with all its notices and agendas:

*“Any individual requiring special accommodations to allow access or participation at this meeting is asked to notify Stephanie Halford, GF-EGF MPO Executive Director at (701)746-2660 of his/her needs five (5) days prior to the meeting. Also, materials can be provided in alternative formats: large print, Braille, cassette tape, or on computer disk for people with disabilities or with Limited English Proficiency (LEP) by contacting the MPO Executive Director at 701-746-2660.”*

The MPO holds all its public meetings, open houses, Technical Advisory Committee meetings, and Policy Board meetings in ADA-compliant facilities and in locations generally considered served by public transportation. Additionally, all public notices and meeting agendas contain contact information for individuals requesting reasonable accommodations to participate in any MPO meeting.

The MPO does not own the buildings in which its offices are housed, but rather, rents the office space. The buildings are, however, ADA accessible, and provides parking and automatic doors for mobility impaired individuals, curb ramps, and an ADA accessible elevator to access MPO offices. Further, the MPO requests written statements from the building owners that the buildings are ADA compliant.

Lastly, the MPO provided the opportunity for both Grand Forks and East Grand Forks to have a new ADA Right of way Transition Plan completed. East Grand Forks accepted this offer and the MPO, together with the City of East Grand Forks and the consulting firm of SRF Consulting, Inc., prepared and developed this document. This included a public engagement opportunity at each of the key points during the process. The Plan was adopted by East Grand Forks and is being used to make process towards complying with ADA within its right of way.

## Restriction on influencing certain federal activities (49 CFR Part 20)

The MPO policy is that no state or federal funds received by the agencies shall be paid to any person for the purpose of influencing the award of a federal contract, grant or loan or the entering into a cooperative agreement. No state or federal funds received by the agencies will be used directly or indirectly to influence any member of Congress, any member of the North Dakota or Minnesota State Legislatures, or any local elected official to favor or oppose the adoption of any proposed legislation pending before any federal, state or local legislative body. The MPO requires in each of its contract with consultants a provision signed by the consultant that this “anti-lobbying” provisions were met.

## Restriction on Procurements from Debarred or Suspended Persons/Firms (49 CFR part 29 subparts A to E)

Grantees, contractors, and subcontractors (at any level) that enter into covered transactions are required to verify that the entity (as well as its principals and affiliates) they propose to contract or subcontract with is not excluded or disqualified. Grantees, contractors, and subcontractors who enter into covered transactions also must require the entities they contract with to comply with 49 CFR 29, subpart C and include this requirement in their own subsequent covered transactions (i.e., the requirement flows down to subcontracts at all levels).

All MPO contracts are covered transactions for purposes of 49 CFR Part 29. As such, the contractor is required to verify that none of the contractor, its principals, as defined in 49 CFR 29.995, or affiliates, as defined at 49 CFR 29.905, are excluded, or disqualified as defined at 49 CFR 29.940 and 29.945. The contractor is required to comply with 49 CFR 29, Subpart C and must include the requirement to comply with 49 CFR 29, Subpart C in any lower tier covered transaction it enters into. The MPO includes with all Requests for Proposal and Contracts a form to receive from the bidder/firm a signed statement of the responsibilities in this area.

## Drug Free Workplace Certification (49 CFR Part 29 sub-part F)

The MPO as part of its Administrative Policies and Procedures, and as part of its Personnel Policies maintain a Drug Free Workforce Policy. The MPO Employee Handbook identifies The MPO’s Substance Abuse Policy, which includes prohibited acts, responsibilities for enforcement, and consequences for not following the policy.

## Executive Order 12898- Environmental Justice in the Metropolitan Transportation Plan

The MPO maintains an Environmental Justice Manual (2022) to guide its implementation of the three principles of EJ. Environmental Justice areas are defined in the MPO EJ Manual. Funding is allocated as part of the UPWP to maintain an active participation and analytical approach that produces procedures that meet Environmental Justice requirements by ensuring that federally

funded transportation projects adequately consider effects on low-income and minority segments of the population.

The MPO produces with its regional and sub-regional transportation studies information documenting the effects of proposed transportation improvements on areas identified as EJ areas.

The MPO provides with the annual TIP an overlay of programmed transportation projects with the defined EJ areas to identify projects that would potentially impact EJ residents. In conjunction with its Public Participation Plan, the EJ's principle of active engagement of EJ populations is completed.

The MPO's multi-modal long range transportation plan, environmental justice analysis is done on all alternatives being contemplated to identify projects that potentially impact EJ populations. Further, in conjunction with the MPO Public Participation Plan, the EJ's principle of active engagement of EJ populations is completed.



**MPO Staff Report**  
**Technical Advisory Committee:**  
July 12, 2023  
**MPO Executive Board:**  
July 19, 2023

**STAFF RECOMMENDED ACTION:** Final approval of the Bike and Pedestrian Plan.

**TAC RECOMMENDED ACTION:**

Matter of final approval of the Bike and Pedestrian Plan.

**Background:**

The Bicycle and Pedestrian Element is part of the 2050 Metropolitan Transportation Plan (MTP). The Plan is updated every five years. The Bicycle and Pedestrian Element was last updated in 2018. The Greater Grand Forks pedestrian and bicycle draft plan was developed from public & steering committee input, analysis of existing conditions, and the needs & demands analysis. Bicycling and walking are increasingly important parts of urban transportation. They're simple, affordable, and healthy ways to get around cities, but they need planning and investment for people to make an easy choice to bike or walk for more trips. Throughout 2022 and into 2023 the Grand Forks and East Grand Forks Metropolitan Planning Organization (MPO) and community partners has been updating the Bicycle and Pedestrian Element. The Element is part of the larger Metropolitan Transportation Plan, which guides planning and investment through 2050. This updated bicycle and pedestrian plan will be used to prioritize improvements in bicycling and walking that will make Grand Forks and East Grand Forks better places to walk and bicycle for all transportation needs.

**Findings and Analysis:**

- The Bike and Pedestrian plan are an element of the MTP.

**Support Materials:**

- [Draft Greater Grand Forks Bike-Ped Plan \(1\).pdf \(civillive.com\)](#)
  - Updates to Priority Project tables – pages 60 & 61



Grand Forks #121003 PCN 23349	Grand Forks	32nd Ave S	The NDDOT will do a pavement preservation project between I-29 and S Washington St. Pavement preservation to be CPR, grinding and microseal	REMARKS: This project was pending funding in 2025 and was moved to be funded in 2023									
	NDDOT	Principal Arterial			Operations	0							
					Capital	0							
			NDDOT will do Milling, Hot Bit Pave, and Curb Ramp		P.E.	0							
			Preventative Maintenance work on 32nd Ave between S 38th St to S 17th St		TOTAL	1,273,739	1,030,836	115,529		127,374	R.O.W.	0	
	Rehabilitation	Discretionary		3,356,000	2,684,800	335,600		335,600	CONSTR.	1,273,739			
Urban Regional Secondary Roads Program									TOTAL	1,273,739			

Grand Forks #121003b PCN 24023	Grand Forks	32nd Ave S	NDDOT will do CPR, Chip Seal, and Pavement Marking on 32nd Ave S (US-81) from I-29 to S Washington St	REMARKS: This project is split from another project. Funding coming from 2 Federal funding sources then combined into one TIP listing.									
	NDDOT	Principal Arterial			Operations								
					Capital								
					P.E.								
					TOTAL	2,000,000	1,618,600	170,516		210,884	R.O.W.		
	Rehabilitation	Discretionary		2,000,000	1,618,600	170,516		210,884	CONSTR.	2,000,000			
Urban Program & Urban Regional Secondary Roads Program									TOTAL	2,000,000			

- New project added.

Grand Forks #118001 PCN	Grand Forks	N/S 42nd St	This is the Preliminary Engineering Phase of the 42nd St & DeMers Ave Railroad Overpass Project	REMARKS: Needed to get CATEX Approval									
	Grand Forks	Minor Arterial			Operations								
					Capital								
					P.E.	6,400,000							
					TOTAL	6,400,000	5,120,000	320,000		960,000	R.O.W.		
	Preliminary Engineering	Discretionary		6,400,000	5,120,000	320,000		960,000	CONSTR.				
									TOTAL	6,400,000			

### Findings and Analysis

- Splitting the project caused a change in termini is cause for an amendment.
- The addition of a new project is a cause for an amendment.
- Amendment process needs a public hearing.
- The proposed project amendments are consistent with the MPO MTP.

### Support Materials:

- Amendment 5 – FY2023-2026 document
- Public hearing notice.
- NDDOT Notification



**GRAND FORKS - EAST GRAND FORKS METROPOLITAN PLANNING ORGANIZATION**

**TRANSPORTATION IMPROVEMENT PROGRAM**

**FISCAL YEARS 2023 - 2026**

URBAN AREA	PROJECT LOCATION	FACILITY	PROJECT DESCRIPTION	ESTIMATED COST					STAGING	ANNUAL	FUTURE			
	RESPONSIBLE AGENCY	CLASSIFICATION		AND SOURCE OF FUNDING						ELEMENT	EXPENDITURES			
PROJECT NUMBER	PROJECT TYPE	FUNDING STATUS		TOTAL	FEDERAL	STATE	OTHER	LOCAL	2023	2024	2025	2026		
				FUNDING SOURCE					Operations	Capital	P.E.	R.O.W.	CONSTR.	TOTAL
Grand Forks #122011	Grand Forks Dis	Various	Var HWYS- Grand Forks District Pavement Mark	REMARKS:										
PCN 23797	NDDOT	Various	Note: This is a District wide project, but there are a few locations that are within the MPO planning boundaries	TOTAL	FEDERAL	STATE	OTHER	LOCAL	Operations	0				
	Safety	Discretionary		1,500,000.00	1,350,000.00	150,000.00			Capital	0				
				90/10 (Federal/State)					P.E.	0				
									R.O.W.	0				
									CONSTR.	1,500,000				
									TOTAL	1,500,000				
Grand Forks #121003	Grand Forks	32nd Ave S	The NDDOT will do a pavement preservation project between I-29 and S Washington St. Pavement preservation to be CPR, grinding and microseal	REMARKS: This project was pending funding in 2025 and was moved to be funded in 2023										
PCN 23349	NDDOT	Principal Arterial	NDDOT will do Milling, Hot Bit Pave, and Curb Ramp Preventative Maintenance work on 32nd Ave between S 38th St to S 17th St	1,273,739	1,030,836	115,529		127,374	Operations	0				
	Rehabilitation	Discretionary		TOTAL	FEDERAL	STATE	OTHER	LOCAL	Capital	0				
				3,356,000	2,684,800	335,600		335,600	P.E.	0				
				Urban Regional Secondary Roads Program					R.O.W.	0				
									CONSTR.	1,273,739				
									TOTAL	1,273,739				
Grand Forks #123030	Grand Forks	Univesity Ave DOT- AAR# 081287Y	Surface rehabilitation and lift on the crossing.	REMARKS:										
PCN 24003	NDDOT	Minor Arterial		TOTAL	FEDERAL	STATE	OTHER	LOCAL	Operations					
	Rehabilitation	Railroad		141,035	141,035				Capital					
				Federal Railroad Funds					P.E.					
								R.O.W.						
								CONSTR.	141,035					
								TOTAL	141,035					





## **PUBLIC NOTICE**

The Grand Forks - East Grand Forks Metropolitan Planning Organization (MPO) will hold a public hearing on the proposed amendment to the MPO FY2023 to FY2026 Transportation Improvement Program (TIP). The TIP also incorporates the local transit operators' Program of Projects (POP). The hearing will be held during a regular, monthly meeting of the MPO's Technical Advisory Committee (TAC). The meeting will be held in the Training Room of East Grand Forks City Hall, 600 DeMers Ave, East Grand Forks, MN. Due to the COVID-19 public health emergency, some members of the MPO's TAC may be participating virtually. The hearing will be held at 1:30 PM on July 12th. The public, particularly special and private sector transportation providers, are encouraged to provide input via email.

A copy of the proposed amendment is available for review and comment at the MPO website [www.theforksmpo.org](http://www.theforksmpo.org). Written comments on the proposed amendment can be submitted to the email address [info@theforksmpo.org](mailto:info@theforksmpo.org) before noon on July 12th. All comments received prior to noon on the meeting day will be considered part of the record of the meeting as if personally presented. If substantial changes occur to the document due to comments received, the MPO will hold another public hearing on the changes. For further information, contact Teri Kouba at 701-746-2660.

The GF-EGFMPO will make every reasonable accommodation to provide an accessible meeting facility for all persons. Appropriate provisions for the hearing and visually challenged or persons with limited English Proficiency (LEP) will be made if the meeting conductors are notified 5 days prior to the meeting date, if possible. To request language interpretation, an auxiliary aid or service (i.e., sign language interpreter, accessible parking, or materials in alternative format) contact Stephanie Halford of GF-EGFMPO at 701-746-2660. TTY users may use Relay North Dakota 711 or 1-800-366-6888.

RE: GFEGFMPO Project Revisions through 6/2

From: Zacher, Wayne A. (wzacher@nd.gov)  
To: teri.kouba@theforksmmpo.org  
Cc: stephanie.halford@theforksmmpo.org; mijohnson@nd.gov; smhanson@nd.gov; jlkadmas@nd.gov; ghpalo@nd.gov; dkuharenko@grandforksgov.com  
Date: Tuesday, June 6, 2023 at 01:17 PM CDT

Teri,

The FHWA authorization was not pulled, so we should still be able to move forward with the TIP amendment as early as possible (July TAC/PB). The original project will be split into 2. The one identified below will be rebid on June 23<sup>rd</sup> and the other segment will be bid this fall.

I have included others on this email to ensure we are on the same page.

**Wayne Zacher**

*MPO Coordinator/Transportation Engineer*

701.328.4828 • [wzacher@nd.gov](mailto:wzacher@nd.gov)

---

**From:** Teri Kouba <teri.kouba@theforksmmpo.org>  
**Sent:** Tuesday, June 6, 2023 1:05 PM  
**To:** Zacher, Wayne A. <wzacher@nd.gov>  
**Cc:** Stephanie Halford <stephanie.halford@theforksmmpo.org>  
**Subject:** Re: GFEGFMPO Project Revisions through 6/2

\*\*\*\*\* CAUTION: This email originated from an outside source. Do not click links or open attachments unless you know they are safe. \*\*\*\*\*

Wayne,

We will need to amend the MPO TIP for this. Is it ok if we do this in July. It isn't currently part of the amendment for the MnDOT project. We need to have it in the newspaper 10 days before the public hearing.

Thank you,  
Teri Kouba  
Senior Planner

GF-EGF MPO

Cell: 701-610-6582

MPO Office: 701-746-2660

[www.theforksmmpo.org](http://www.theforksmmpo.org)

On Monday, June 5, 2023 at 08:05:29 AM CDT, Zacher, Wayne A. <[wzacher@nd.gov](mailto:wzacher@nd.gov)> wrote:

Teri,

Here are your project revisions from last week to projects inside GFEGFMPO MPA:

PCN: 23349 – Project limits changes and is being rebid in a couple weeks. The original bid from May was rejected.

PROJECT ID: NHU-6-081(111)940

DESCRIPTION: GF 32ND AVE,W OF 38TH TO E OF 17TH

TYPE OF WORK: MILLING,HOT BIT PAVE,CURB RAMPS

IMPROVEMENTS: PREVENTIVE MAINTENANCE

LENGTH: 1.6100

TOTAL ESTIMATED COST: \$1,273,738.73

BID OPENING DATE: 06/23/2023 09:30AM

PROJECT COMPLETE DATE: 05/31/2023

MILESTONE ACTIVITIES: YES

FHWA INTERACTION: FHWA LIMITED TO ENVIRONMENTAL AND AUTHORIZATION

FUNDING TYPE: REGULAR BID OPENING

CHANGE:

PREV PROJECT ID: NHU-SU-6-081(111)940

PROJECT LIMITS CHANGED

PREV DESC: GF 32ND AVE, I-29 TO WASHINGTON ST

[Wayne A. Zacher, P.E.](#)

*MPO Coordinator/Transportation Engineer*

*Local Government Division*

701.328.4828 • [wzacher@nd.gov](mailto:wzacher@nd.gov) • [dot.nd.gov](http://dot.nd.gov)



608 E. Boulevard Ave. • Bismarck, ND

RE: New 32nd Ave Project

From: Zacher, Wayne A. (wzacher@nd.gov)  
To: teri.kouba@theforksmmpo.org  
Cc: stephanie.halford@theforksmmpo.org; ghpal@nd.gov  
Date: Thursday, June 8, 2023 at 09:53 AM CDT

Teri,

Here is the complete project number and PCN:

PCN 24023 NHU-SU-6-081(118)940

This information will also likely be in the project master changes that I will send out next week.

[Wayne Zacher](#)

MPO Coordinator/Transportation Engineer

701.328.4828 • [wzacher@nd.gov](mailto:wzacher@nd.gov)

---

**From:** Zacher, Wayne A.  
**Sent:** Thursday, June 8, 2023 7:35 AM  
**To:** Teri Kouba <teri.kouba@theforksmmpo.org>  
**Cc:** Stephanie Halford <stephanie.halford@theforksmmpo.org>; Palo, George H. <ghpal@nd.gov>  
**Subject:** New 32nd Ave Project

Teri,

Here is the beginnings of the new 32<sup>nd</sup> Ave S project (second half part of the project that was rejected).

**Project Number:** NHU-SU-6-081(???)940 (RP 940.000 to RP 941.852)

**Description:** Grand Forks, US 81 from I-29 to Washington St

**Improvement Type:** Preventative Maintenance

**Work Types:** CPR, Chip Seal, Pavement Marking

**Cost:** \$2,000,000

NHU = \$1,880,000 (80.93/9.07/10)

SU = \$120,000 (80.93/0/19.07)

**Bid Opening:** 10/13/2023

**Fiscal Year:** 2023

**Plan Completion:** 8/18/2023

I will get you the missing information (highlighted and PCN) when I see it (likely next week with the Project Master Updates). Note this project is anticipated to be using 2023 funds, so it will need to be included in the TIP amendment being processed for July.

[Wayne A. Zacher, P.E.](#)

MPO Coordinator/Transportation Engineer

Local Government Division

701.328.4828 • [wzacher@nd.gov](mailto:wzacher@nd.gov) • [dot.nd.gov](http://dot.nd.gov)



608 E. Boulevard Ave. • Bismarck, ND

FW: PE for Design - 42nd & DeMers

---

From: Zacher, Wayne A. (wzacher@nd.gov)  
To: teri.kouba@theforksmmpo.org  
Cc: stephanie.halford@theforksmmpo.org  
Date: Monday, June 5, 2023 at 01:19 PM CDT

---

Teri,

Please complete a TIP amendment for the above referenced project using the information below. I am working on getting a project number and will get it to you as soon as I get it. I realize that it is too late for June, but we should get it in July because we would like to authorize using 2023 funds. A couple of items to note:

- Use the funding splits shown below because the project is split 50/50 between Urban Roads and Urban Regional (have different funding splits)
- Project should be placed in 2023
- This is for the Preliminary Engineering phase of the project

**Wayne Zacher**

*MPO Coordinator/Transportation Engineer*

701.328.4828 • [wzacher@nd.gov](mailto:wzacher@nd.gov)

---

**From:** Hanson, Stacey M. <smhanson@nd.gov>  
**Sent:** Monday, June 5, 2023 1:00 PM  
**To:** Zacher, Wayne A. <wzacher@nd.gov>  
**Cc:** Johnson, Michael E. <mijohnson@nd.gov>; Kuharenko, David <dkuharenko@grandforksgov.com>; Marohl, Sengaroun <smarohl@nd.gov>  
**Subject:** PE for Design - 42nd & DeMers

Wayne

Please work with the MPO for a TIP amendment for the next PE phase for the 42<sup>nd</sup> St & DeMers Ave project. We need to get the next phase in the TIP and STIP so we can get CATEX approval.

Below is the request from the annual priorities submittal, which Mr. Orn concurred with:

Total	\$6,400,000
Federal	\$5,120,000
State	\$ 320,000
City	\$ 960,000

This breakout may look odd but it is the total split 50/50 between the Urban Regional and Urban Roads programs. The TIP and STIP don't need to identify that so I combined them into one as we will have one line item for the project.

Please let me know if any questions.

Thanks,

Stacey Hanson, PE  
Assistant Local Government Engineer  
NDDOT  
701-328-4469 office  
701-527-8879 cell  
[smhanson@nd.gov](mailto:smhanson@nd.gov)



# **MPO Staff Report**

## **Technical Advisory Committee:**

July 12, 2023

## **MPO Executive Board:**

**STAFF RECOMMENDED ACTION: Update from the University of North Dakota on the intern conducting a Traffic Speed Study.**

**TAC RECOMMENDED ACTION:**

Matter of an update from the University of North Dakota (UND) on the intern conducting a Traffic Speed Study.

### **Background:**

This discussion started a year ago as a great partnership opportunity with the University of North Dakota (UND) and Grand Forks/East Grand Forks Metropolitan Planning Organization.

The main objectives of the study include:

- Analyze traffic safety and speeding tickets data for South Grand Forks and determine locations that need more detailed speed studies.
- Determine the effects of traffic calming techniques on driver behavior and pedestrian safety.
- Recommend approaches to address traffic safety concerns.

### **Findings and Analysis:**

- Effect of traffic calming techniques on traffic speed and pedestrian safety

### **Support Materials:**

- Preliminary review and findings



**Traffic Speed, Traffic Calming Techniques, and Safety Implications for Pedestrians and Bicyclists**

**Report submitted by: Mulugeta Amare and Daba Gedafa**

Principal Investigator: **Daba S. Gedafa, Ph.D., P.E., ENV SP, F. ASCE**  
**Chair and Michael & Sitney Lodoen Endowed Professor**  
**UND Civil Engineering**

Proposed Budget: **\$30,000.00**

Proposed Period: **November 16, 2022-July 15, 2024**



July 2023

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## **ABSTRACT**

Transportation involves the movement of road users on a given corridor, and the safety aspect is the primary concern for the transportation system. Previous reports have documented that traffic speeding is a safety concern for pedestrians and bicyclists, contributing to 29 percent of fatalities and 13 percent of injuries. It involves engineering, driving behavior, education, and enforcement actions to tackle these incidents. The main objective of this study was to present a review of the safety implications of traffic speed for pedestrians and bicyclists and the traffic speed calming techniques on non-interstate highways. The spatiotemporal cluster of traffic crashes was analyzed to identify hot spot areas. The Emerging Hot-Spot Analysis, Hot Spot Analysis (Getis-Ord  $G_i^*$ ), and Spatial Autocorrelation (ANN and Global Moran's I) tools of ArcGIS Pro were used. The results evidence that traffic crashes and fatality rates increase exponentially with the traffic speed, and using speed humps, speed tables, chicanes, and speed-activated speed limit signs significantly reduces traffic speed. Placing yield and STOP in crosswalk signs lowers the average speed, and the difference was significant. Moreover, the results show that spatial clustering between crashes exists, and a spatiotemporal cluster dominantly occurred in the northeast Grand Forks.

## **INTRODUCTION**

Agencies work closely with law enforcement entities, state traffic safety offices, and the National Highway Traffic Safety Administration (NHTSA) to plan and implement policies that can help reduce the number of crashes to combat high costs, injuries, and deaths. One approach is through the Four Es of traffic safety: Enforcement, Engineering, Education, and Emergency Medical Services. The Four Es play an important role in road safety: each component is essential and, when taken together as a unified approach, has achieved the lowest crash rates in decades. There were 5.5 million police-reported traffic crashes in 2009. Law enforcement officers work diligently to prevent crashes by enforcing traffic safety laws such as seat belt use, child passenger protection, traveling over the speed limit, impaired driving, and distracted driving. Studies have indicated that increased enforcement and educational campaigns can yield significant changes in driver behavior.

A national awareness campaign called “Click It or Ticket” has increased seatbelt use by as much as 85 percent between 2005 and 2009, saving an estimated 72,000 lives. The NHTSA, state DOTs, law enforcement, and traffic safety offices can prevent crashes by holistically addressing the four

components. Technology can also improve how traffic safety advocates, engineers, and other vital stakeholders use the Four Es. The Four Es approach has contributed to a steady decline in fatality and injury rates over the past few years. The ultimate safety goal is Toward Zero Deaths (TZD) on all highways, a data-driven highway safety strategy focusing on changing driver culture. The TZD initiative relies on data from crashes and police stops, in concert with the four Es, to determine priority areas and make policy and program changes that will reduce the current fatality rate per million vehicle miles traveled (VMT) from 1.14 to zero.

Data used in this analysis includes vehicle speed, traffic volume at the time of the crash, law enforcement crash investigation information, emergency medical response information, road sensor, design data, and the effectiveness of public education campaigns. This data can be analyzed holistically to assist decision-makers in creating strategies for comprehensive traffic safety improvement plans. Local, state, and federal agencies host this data in various databases, formats, and types of hardware, creating a challenge when integrating this information to create the holistic view of traffic safety needed to coordinate an approach that prevents crashes. Data analysis enables road designers, law enforcement officers, emergency medical responders, and those designing public education campaigns to identify trends and develop highway safety plans and interventions with the best return on investment.

## **PROBLEM STATEMENT**

Safety and traffic concerns arise from increased vehicle traffic, excessive speed, and a disregard for stop signs. The speed of the vehicles is a function of the roadway quality, driver behavior, time of the day, and other roadway elements like traffic signals. Speeding is a perceived issue in general near the intersection of Belmont Rd and 55<sup>th</sup> Ave S in particular. A pedestrian struck by a speeding vehicle in a residential neighborhood with low posted speed limits will have a much higher mortality rate. If a driver increases a speed from 20 mph to 30 mph, the pedestrian fatality rate may increase by 40%, especially since the driver's ability to stop quickly decreases as their speed increases. That ten mph increase in speed affects a driver's stopping distance by about 85 feet, significantly impacting their ability to stop suddenly, especially under wet, snowy, and icy conditions prevalent in Grand Forks.

Some methods that can increase a driver's adherence to yielding for pedestrians and reduce their traffic speed are the installation of "Stop for Pedestrian" and "Yield to Pedestrians within

Crosswalks” signs. The Manual on Uniform Traffic Control Devices (MUTCD) by the Federal Highway Administration (FHWA) includes in-roadway “Yield to Pedestrians within Crosswalks” signs that can be placed at uncontrolled marked crosswalks (FHWA 2009). In-roadway signs may be effective since they are directly in the motorist’s field of view. A study on the impacts of alternative yield sign placement on pedestrian safety (Gedafa et al. 2014) determined that placing a yield sign at a crosswalk was the most effective way of increasing the likelihood of a vehicle yielding for pedestrians; however, the authors recommended research on the repeatability of their results at other sites to increase the robustness of their findings.

Therefore, Part 1 of this paper reviews the safety concerns regarding traffic speed and engineering traffic speed-calming techniques, preferred locations, and their effect on pedestrians and bicyclists by reducing traffic speed. Part 2 presented traffic crash analysis and hot spot identification using ArcGIS geospatial and analysis tools. Part 3 illustrates the effect of Yield and STOP in crosswalk signs on vehicle speed and yield to pedestrians.

## **OBJECTIVES OF THE PROJECT**

The main objectives of this study include the following:

- Analyzing the effect of yield and STOP in crosswalk signs on driver’s yielding and speeding behavior and the associated safety implications on pedestrians and bicyclists in Grand Forks,
- Identifying hot spot areas through traffic crash data analysis, and
- Determine the effects of traffic calming techniques on vehicle speed and pedestrian and bicyclist safety.

## **PART 1: LITERATURE REVIEW**

The literature has included reviews that have been done so far.

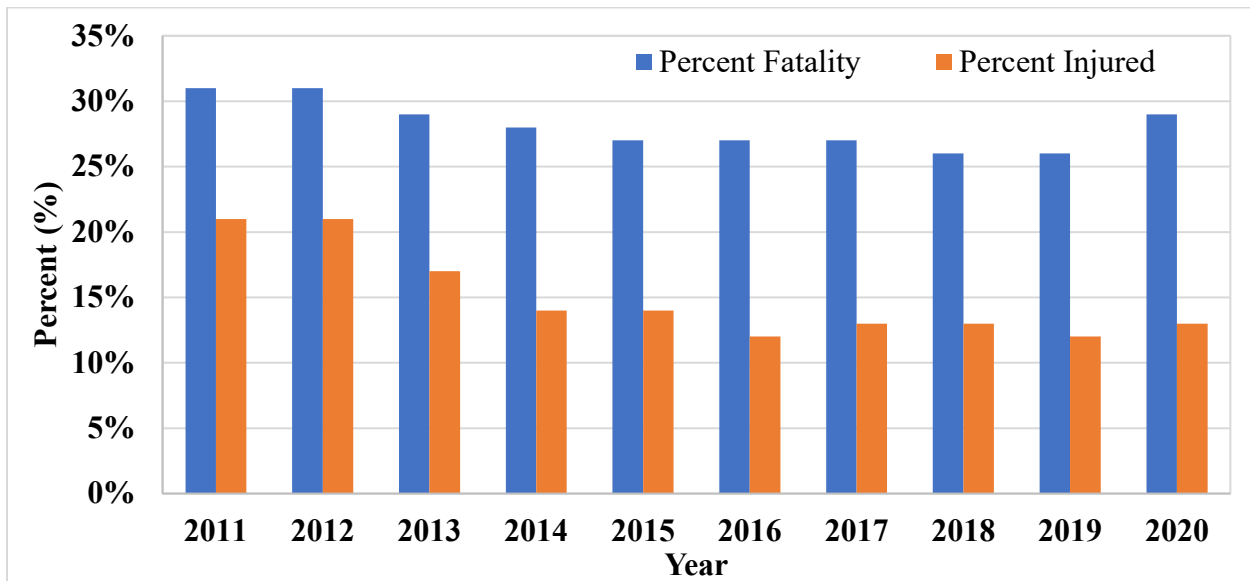
### **Traffic Speed and Safety**

Increasing vehicle traffic, excessive speed, and disregard for stop signs pose safety and traffic concerns. According to the World Health Organization, WHO, report (WHO 2021), the United States is way behind other developed countries regarding traffic safety concerns. The Road Traffic Death Rate per 100,000 Population in the USA is 12.7, more than twice the rate in Canada, which is second place on the list. The 2020 traffic safety fact report from NHTSA shows that 29% of the



total 38,824 fatalities and 13% of the total 1,974,002 injuries across the nation were due to speeding. Moreover, speeding-related fatalities have increased by 17% from 2019 to 2020 (NHTSA 2022). Speed and aggressive driving were a factor in 34% of fatal crashes in North Dakota in 2021. In addition, a speed driving-related crash occurred every two and half hours, and fatality occurred once in nearly ten days (NDDOT 2022).

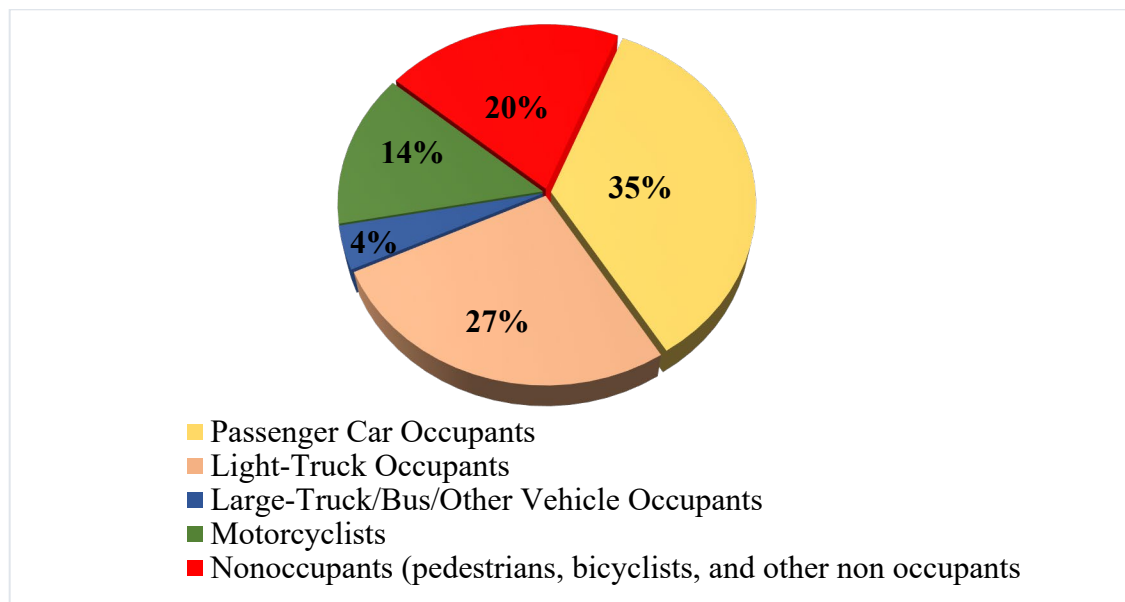
Figure 1 presents the percent contribution of speeding towards fatalities and injuries. For the ten years of data in the USA, the average contribution of speeding is 28% and 15% for fatality and injuries, respectively. Other factors like belt non-use, helmet non-use, distraction, alcohol involvement and causation, and absence of traffic signs and signals account for the remaining percentage.



**Figure 1 Percent fatality and injury due to traffic speeding, 2020 USA (NHTSA 2022)**

In a Crash Summary Report by the North Dakota Department of Transportation (NDDOT), more than 50% of the traffic citation for five consecutive years (2011-2016) reports were due to speeding. Moreover, in 2021, 27% of the fatalities were due to speeding. Among all the counties in North Dakota, Grand Forks is ranked second and third in crash rate per million vehicle miles traveled (MVMT) and the number of crashes, respectively. In 2021, nearly every six and three days, one bicyclist and one pedestrian were involved in a crash (NDDOT 2022).

The NHTSA fact sheet data (NHTSA 2022) for ten consecutive years, 2011-2020, documented the fatality exposures experienced by five groups of road users. The passenger car occupants are the most affected, followed by light trucks and non-occupants. Figure 2 summarizes the percentage fatality of each passenger type in the USA in 2020. From this, it is evident that at least 1 out of 5 persons killed is non-occupant, mainly pedestrians and bicyclists.

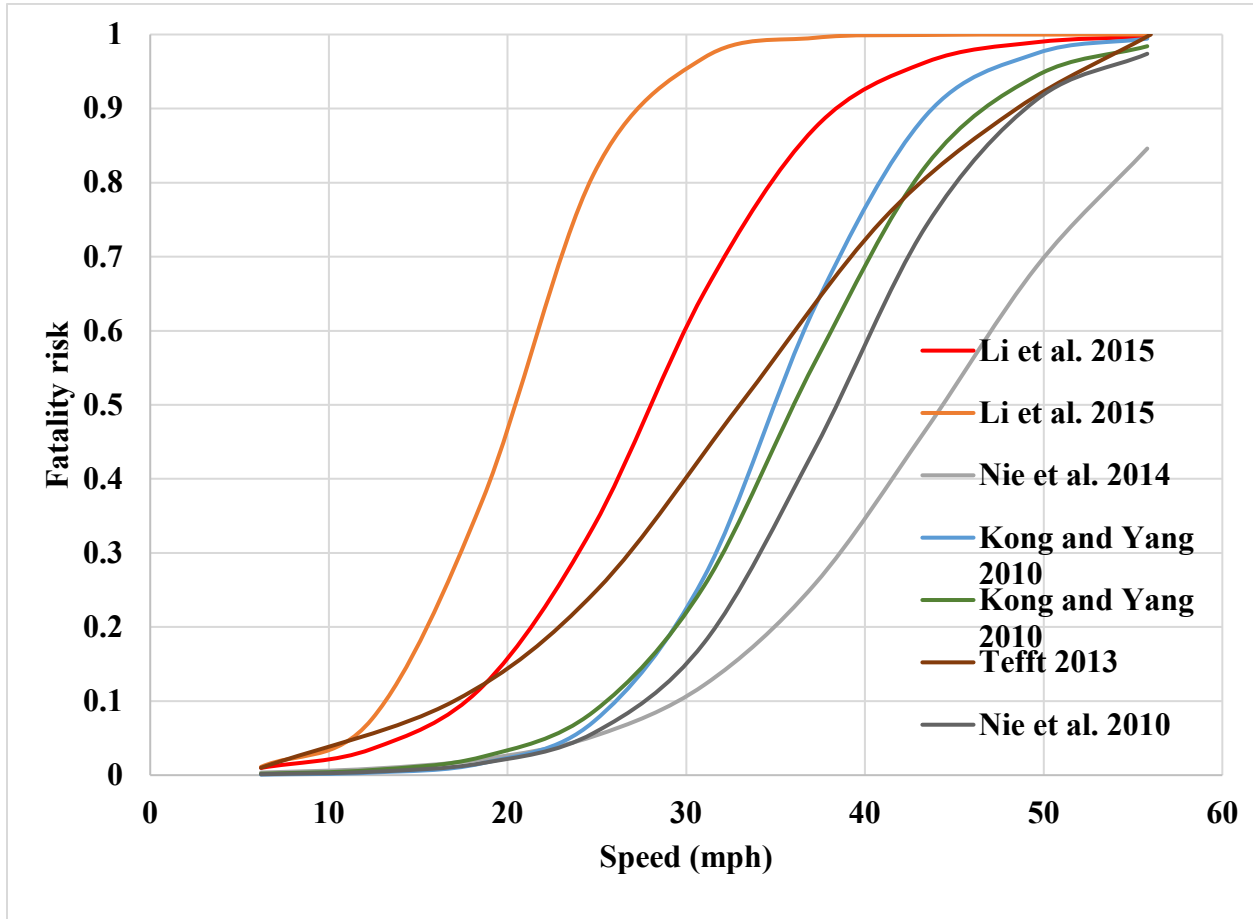


**Figure 2 Percentage of traffic fatality per occupant type, 2020 USA (NHTSA 2022)**

The relationship between the risk of fatality of a given passenger hit by a vehicle and the speed of the vehicle during collision or impact is calculated using a single logistic regression model, and it is called risk factor (Kong and Yang 2010; Li et al. 2015; Nie et al. 2014; Nie et al. 2010; Tefft 2013). The trend of the fatality curve is similar for all curves, and the risk of pedestrian death looks inevitable for speed values greater than 40mph. Figure 3 summarizes the results of regression models developed by researchers for different countries (considering other parameters like age, impact location, and pedestrian height are constant).

By reducing vehicle speeds and enhancing safety for non-motorized street users, traffic calming can enhance the quality of life for locals living along affected roadways. By improving the safety, mobility, and comfort of non-motorists, traffic calming supports the livability and vitality of residential and commercial districts. These goals are often met by lowering vehicle speeds or densities on a single route or a network of streets. Roadside, vertical, lane-narrowing, and other

elements that use self-enforcing physical or psycho-perception mechanisms to achieve desired results are included in traffic-calming measures (FHWA 2017).



**Figure 3 Vehicle speed vs. Fatality risk for pedestrians**

### **Effect of Traffic Calming Techniques on Traffic Speed, Pedestrian, and Bicyclist Safety**

The Institute of Transportation Engineers defines traffic calming as the combination of measures that reduce the adverse effects of motor vehicle use, alter driver behavior, and improve conditions for non-motorized street users. Traffic calming consists of physical design and other measures put in place on existing roads to reduce vehicle speeds and improve safety for pedestrians and cyclists. For example, vertical deflections (speed humps, speed tables, and raised intersections), horizontal shifts, and roadway narrowing are intended to reduce speed and enhance the street environment

for non-motorists. Closures that obstruct traffic movements in one or more directions, such as median barriers, are intended to reduce cut-through traffic. Traffic calming measures can be implemented at an intersection, street, neighborhood, or area-wide level (USDOT 2021). Table 1 summarizes traffic calming techniques and case study areas registered by FHWA.

**Table 1 Summary of traffic-calming countermeasures (FHWA 2017; Johnson 2005; Zegeer et al. 2013)**

<b>Traffic calming measures</b>	<b>Purpose</b>	<b>Main Considerations</b>	<b>Case study area</b>
Temporary Installations for Traffic Calming	Change the entire look of a street to send a message to drivers that the road is not for fast driving.	Check for the cost of measures and use them for specific and emergency cases.	Fifth Street Traffic Calming, Tempe, Arizona
Chokers	Designed to slow vehicles at a mid-point along the street through	Ensure that bicyclist safety and mobility are not diminished	Fifth Street Traffic Calming, Tempe, Arizona
Chicanes	Reduce vehicle speeds on local streets and add greener (landscaping).	Reduce on-street parking	Berkshire Street Traffic Calming, Cambridge, Massachusetts
Mini-circles	Reduce speed and manage traffic at intersections where volumes do not warrant a stop sign or a signal.	Use yield, not stop, controls, and do not make generous allowances for motor vehicles by increasing radii.	Seventh Avenue Traffic Calming, Naples, Florida
Speed Humps and Speed Tables	Enhance the pedestrian environment at pedestrian crossings.	Not recommended in a sharp curve.	Corridor Traffic Calming, Albemarle, Virginia

Gateways	Create an expectation for motorists to drive more slowly and watch for pedestrians entering a commercial, business, or residential district from a higher-speed roadway. They can also create a unique image for an area.	Traffic-slowing effects will depend upon the chosen device and the area's overall traffic-calming plan.	Leland Street Redesign Bethesda, Montgomery County, Maryland
Specific Paving Treatments	Send a visual to motorists about the function of a street and create an aesthetic enhancement of a street and be used to delineate separate spaces for pedestrians or bicyclists.	Slippery and bumpy surfaces should be treated.	Downtown Revitalization Partnerships, Clemson, South Carolina
Serpentine Design	Change the entire look of a street to send a message to motorists to drive slowly on this street.	Most cost-effective to build as a new street or where a street will soon undergo major reconstruction	Old Town Improvements, Eureka, California
Curb Ramps	Provide access to street crossings and improve sidewalk accessibility for people with mobility restrictions.	Consideration of disabled pedestrians	
Speed Cushion	preferred alternative primary emergency response route or on a transit route with frequent service	Cutouts width design	

“Road diets” are one approach to traffic calming. Road diets reduce the width or number of vehicular travel lanes and reallocate that space for other uses such as bicycle lanes, pedestrian crossing islands, left turn lanes, or parking. Safety and operational benefits for vehicles and pedestrians include (USDOT 2021):

- decreasing vehicle travel lanes for pedestrians to cross,
- providing room for a pedestrian crossing median,
- improving safety for bicyclists when bicycle lanes are added,
- providing an opportunity for on-street parking (which also serves as a buffer between pedestrians and vehicles),
- reducing rear-end and side-swipe crashes,
- improving speed limit compliance, and
- decreasing crash severity when crashes do occur.

Implementing traffic calming measures can reduce traffic speed, reduce motor-vehicle collisions, and improve safety for pedestrians and cyclists. These measures can also increase pedestrian and bicycling activity (USDOT 2021). Table 2 Summary of effect of traffic calming techniques on 85<sup>th</sup> percentile vehicle speed (FHWA 2014; FHWA 2017) summarizes the effect of traffic calming techniques on 85<sup>th</sup> percentile vehicle speed in different states of Canada and the US. The traffic calming techniques, in most cases, were effective in terms of reducing vehicle speed.

**Table 2 Summary of effect of traffic calming techniques on 85<sup>th</sup> percentile vehicle speed (FHWA 2014; FHWA 2017)**

Traffic Calming Technique	85th %tile Speed (mph)			Study area	No. of sites	Location
	Before	After	Change			
Speed Hump	35	27	-8	Various	178	Straight section and pedestrian crossing
	36	31	-5	WA	8	Excessive speeds and cut-through traffic (at straight sections)
	37	29	-8	FL	1	In rural residential streets
	28	22	-6	IA	3	At a pedestrian crossing of a rural community street
Speed Table	37	31	-6	Various	72	In straight sections of featured community streets
	38	29	-9	GA	19	At continuous intervals on residential streets

	33	29	-4	IA	1	At a pedestrian crossing of a rural community street
	28	22	-6	IA	3	At a pedestrian crossing of a rural community street
Raised Intersection	37	38	1	Various	2	At entire sections of intersections and junctions
	30	30	0	NY	1	At the intersection of medium-traffic street
Chicanes	31	22	-9	WA	4	Side of a straight section of community roads
Center Island	35	33	-2	IA	3	At the intersection and straight section center of main streets
Transverse Rumble Strips	55	54	-1	TX	11	Edge of rural roads and at straight sections near intersections and curves
	49	52	3	KY	3	Horizontally curved rural roads
Converging Chevrons	53	52	-1	TX	-	At the freeway-to-freeway connector ramp
	53	53	0	TX	-	
	37	33	-4	OH	1	At intersection and curve approaches
Speed Activated	36	30	-6	CO	1	In streets near schools and restricted speed zones
Speed Limit Sign	39	34	-5	CO	2	
	37	33	-4	CO	3	
	37	32	-4	CO	1	
Speed Feedback	65	63	-2	TX	1	
Sign with Action Message	59	52	-7	IA	1	
	34	32	-4	WA	9	At curved road sections
	33	31	-5	WA	3	
	36	31	1	WA	1	

With a major contribution from the SRC, West Fargo's project team developed a list of traffic-calming solutions that can be implemented (METROCOG 2021). Some criteria used to come up with the list were feasibility, effectiveness, maintenance, and other measures such as emergency services or vehicular impacts. The list includes lane narrowing, curb extension, pinch-point, chicane, median island, mini roundabout, speed hump, pavement material, diverter, and landscaping.

## **Effects of Yield and Stop Signs on Pedestrian Safety and Traffic Speed**

Engineers have traditionally marked crosswalks for three reasons: to increase pedestrian safety by identifying the safest location to cross the street, to alert drivers to the possibility of pedestrians crossing at that location, and to increase a pedestrian's level of service and safety (Van Houten et al. 2002). Crosswalk markings and their correlation to increased pedestrian safety have been the subject of much debate. A study on the safety effects of marked versus unmarked crosswalks at uncontrolled locations (Zegeer et al. 2001) compared 1,000 marked and 1,000 unmarked crosswalks in 30 US cities. Their study indicated only one instance where there was a significant difference in the number of crashes between marked and unmarked crosswalks: crosswalks on multilane roads with an uncontrolled approach had significantly more crashes than unmarked crosswalks if the road had average annual daily traffic (AADT) above 12,000. The study also indicated that more than 70% of pedestrians cross at marked locations: most notably those younger than 12 and more than 64 years old. Research indicates that marked crosswalks can lead to a false sense of security; however, behavioral data collected from multiple sites before and after crosswalks were installed contradicted this hypothesis. This data indicated that marked crosswalks were associated with higher pedestrian-observing behavior and lower driver speeds (Knoblauch et al. 1999).

Several studies have demonstrated that "Yield to Pedestrian" signs placed in roadways can increase the percentage of motorists yielding for pedestrians (FHWA 2009; Huang et al. 2000). In-roadway signs were also evaluated in other studies (Turner et al. 2006). The research team collected data on motorist yielding behavior at 42 crosswalks in different regions of the United States. The results indicated that the in-roadway signs were associated with yielding rates of 87% for two-lane roads and were highly cost-effective in increasing yielding behavior. Gedafa et al. (2014) also determined that yield signs installed at any location result in vehicles yielding to pedestrians. The placement of the sign at a crosswalk is the most effective method for increased yielding and the presence of a yield sign results in a lower average traffic speed. These findings imply that the risk to pedestrians and bicyclists is lower in the presence of the sign. These studies need to be validated with additional studies at different locations.



Pedestrian's right of way in crosswalk includes driver and pedestrian responsibilities according to North Dakota Century code: when traffic-control signals are not in place or not in operation, the driver of a vehicle shall yield the right of way, slow down or stop if need be to yield so, to a pedestrian crossing the roadway within a crosswalk when the pedestrian is upon the half of the roadway upon which the vehicle is traveling, or when the pedestrian is approaching so closely from the opposite half of the roadway as to be in danger; and no pedestrian may suddenly leave a curb or other place of safety and walk or run into the path of a vehicle which is so close as to constitute an immediate hazard.

## PART 2: TRAFFIC CRASH DATA ANALYSIS

### Study Area

The crash analysis covers the entire cities of Grand Forks (GF) and East Grand Forks (EGF). Figure 4 shows the study area and crash data map. According to the summary crash report, there were 2048 crashes. All of the reported crashes were used for crash and hot spot analysis.

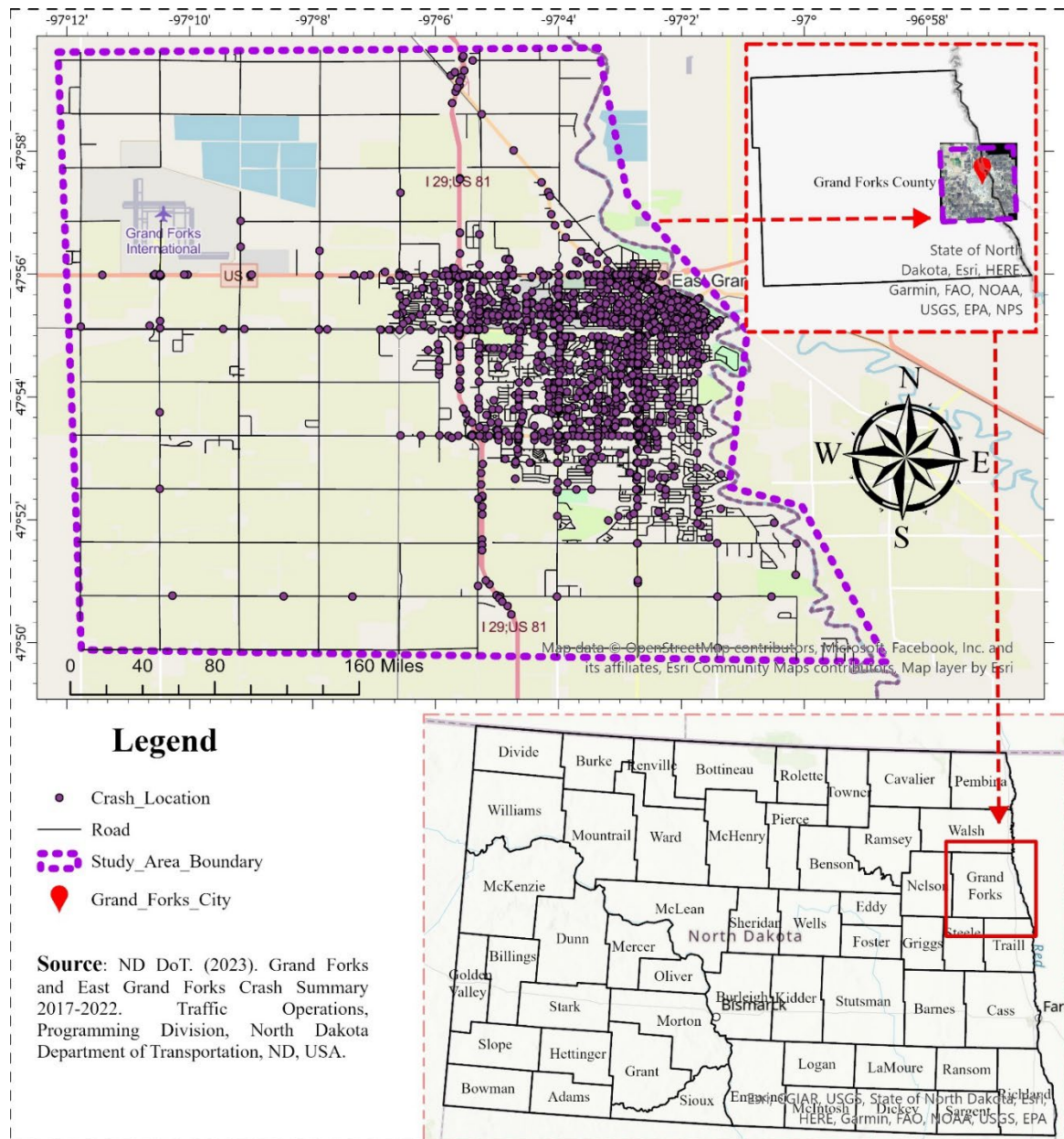


Figure 4 Crash map for GF and EGF city

## Specific Objectives

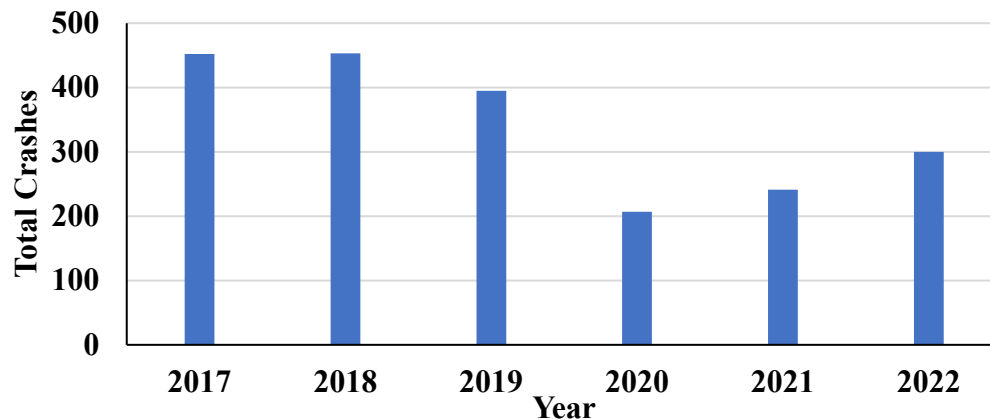
The general objectives of this study were:

- To summarize traffic crashes data and make sense of data concerning crash severity levels and other potential contributing crash factors, and
- To analyze the location of hot spot areas in space and time.

The results will be used to identify specific street locations prone to more severe and higher numbers of crashes.

## Data Collection

The NDDOT traffic operations office provided traffic crash reports for six years (2017-2022). A geodatabase file from GF Data Hub was used to assist with network and hot spot area analysis. Figure 5 depicts the total number of crashes per year. Over the past six years, the total number of crashes shows two patterns; there was a decrease in total number of crashes in the first three years and started to increase thereafter. The total crash number was relatively smaller in 2020.



**Figure 5 Total number of crashes per year**

## Methodology

A spatial analysis was done for all reported crashes. ArcGIS Pro 3.1.2 was used to analyze hot spot areas and spatiotemporal correlations between traffic crashes. A preliminary network screening was done using equivalent property damage only (EPDO) and crash rate methods. The two approaches are relatively more effective than the crash frequency and severity methods (Carter et

al. 2017). The crash frequency and severity screening methods were not considered due to less reliability and fewer available severe crashes, respectively.

The equivalent property damage only (EPDO) method was used to identify sections with higher weighted EPDO values. The technique applies a weighting factor and converts the fatal and all injury severity levels to an equivalent PDO level (Wemple et al. 2014). The NDDOT uses EPDO weighting factors of 100, 55, 17, 11, and 1 for fatal, incapacitating injury, non-incapacitating injury, possible injury, and PDO injury levels, respectively (NDDOT 2021). The results were presented in graduate colors of five groups using the natural breaks (Jenks) method.

$$\mathbf{EPDO\ Weighted\ Total = Fatal\ x\ 100 + incapacitating\ injury\ x\ 55 + non - incapacitating\ injury\ x\ 17 + possible\ injury\ x\ 11 + PDO\ Crashes}$$

(1)

The crash rate method was used for comparing streets using crash rates. The approach considers the Million Vehicle Miles (MVM), average annual daily traffic (AADT), and segment length (NDDOT 2021; Wemple et al. 2014). The AADT for six years was calculated from the available AADT data of the road networks provided in the GF Data Hub. A growth rate of 2% was assumed for the AADT estimation.

$$Crash\ rate = (n * 1,000,000)/(AADT * 365 * t * l) \tag{2}$$

Where  $n$ = number of crashes in the study period per street,  $AADT$ = average annual daily traffic,  $t$ = number of years, and  $l$ =segment length in miles

The Emerging Hot spot Analysis is a space-time pattern tool to identify the space-time clustering of points using other tools like Create Space Time Cube By Aggregating Points, Create Space Time Cube From Defined Locations, or Create Space Time Cube from Multidimensional Raster Layer tool (ESRI 2019). The Create Space Time Cube by Aggregating Points tool was used before running the Emerging Hot Spot Analysis. Each year was divided into four seasons (winter, spring, summer, and autumn) before the hot spot analysis. The results could be categorized as new, consecutive, intensifying, persistent, diminishing, sporadic, oscillating, or historical hot and cold spots. The New, Persistent & Intensifying hot spots are the ones that would need attention.

Hot spot locations were analyzed using Hot Spot Analysis (Getis-Ord  $G_i^*$ ) and the Emerging Hot Spot Analysis tool of ArcGIS Pro. The Hot Spot Analysis (Getis-Ord  $G_i^*$ ) tool calculates the Getis Ord  $G_i^*$  statistic, which tells the high and low spatial cluster of points (ESRI 2019). Each feature's z-score is the  $G_i^*$  statistic returned for the dataset. The intensity of the hot spot (cluster of high values) is proportional to the size of the z-score for positively significant statistical data. The cold spot (clustering of low values) is more pronounced for statistically significant negative z-scores as the z-score gets smaller. Near zero Z score implies no spatial clustering. A feature should have a high value and be surrounded by other features with high values to be statistically significant. The null hypothesis was that the spatiotemporal distribution of crashes was random.

The Getis-Ord statistic is computed as;

$$G_i^* = \frac{(\sum_{j=1}^n W_{i,j} X_j - \bar{X} \sum_{j=1}^n W_{i,j})}{S^* \sqrt{\left( \frac{n \sum_{j=1}^n W_{i,j}^2 - (\sum_{j=1}^n W_{i,j})^2}{n-1} \right)}} \quad (3)$$

$$\bar{X} = \frac{\sum_{j=1}^n X_j}{n} \quad (4)$$

$$S = \sqrt{\frac{\sum_{j=1}^n X_j^2}{n} - \bar{X}^2} \quad (5)$$

Where  $X_j$  is the attribute value for feature  $j$ ,  $W_{i,j}$  is the spatial weight between  $i$  and  $j$ , and  $n$  is the number of features.

For the spatial autocorrelation analysis, the average nearest neighbor (ANN) tool was initially used to check traffic crashes' spatial clustering without the other attributes. The dispersed distribution would be assumed if the average distance is higher than a hypothetical random distribution (ESRI 2019). ANN is given as:

$$ANN = \frac{\bar{D}_o}{\bar{D}_e} \quad (6)$$

Where,  $\bar{D}_o$  is the observed mean distance between each feature and its nearest neighbor, and  $\bar{D}_e$  is the expected mean distance for the features given in a random pattern.

The Global Moran's I tool was used to check spatial autocorrelation using location and count value data. To assess the significance of the spatial correlation, the tool computes Moran's I value, which is between -1 and 1, together with a z-score and p-value. The results of this analysis could be clustered (positive Moran's I), dispersed (negative Moran's I), or random (zero Moran's I) (ESRI 2019). The null hypothesis was that the crash points and attributes were randomly distributed. The Moran's I statistic autocorrelation is calculated as:

$$I = \frac{n \cdot \sum_{i=1}^n \sum_{j=1}^n W_{i,j} Z_i Z_j}{S_o \cdot \sum_{i=1}^n W_{i,j}} \quad (7)$$

$$S_o = \sum_{i=1}^n \sum_{j=1}^n W_{i,j} \quad (8)$$

Where  $Z_i$  is attribute feature (traffic count) deviation from the mean,  $W_{i,j}$  is the spatial weight between feature  $i$  and  $j$ ,  $n$  is the number of features, and  $S_o$  is the aggregate of all the spatial weights.

The  $Z_I$  score can be computed as follows:

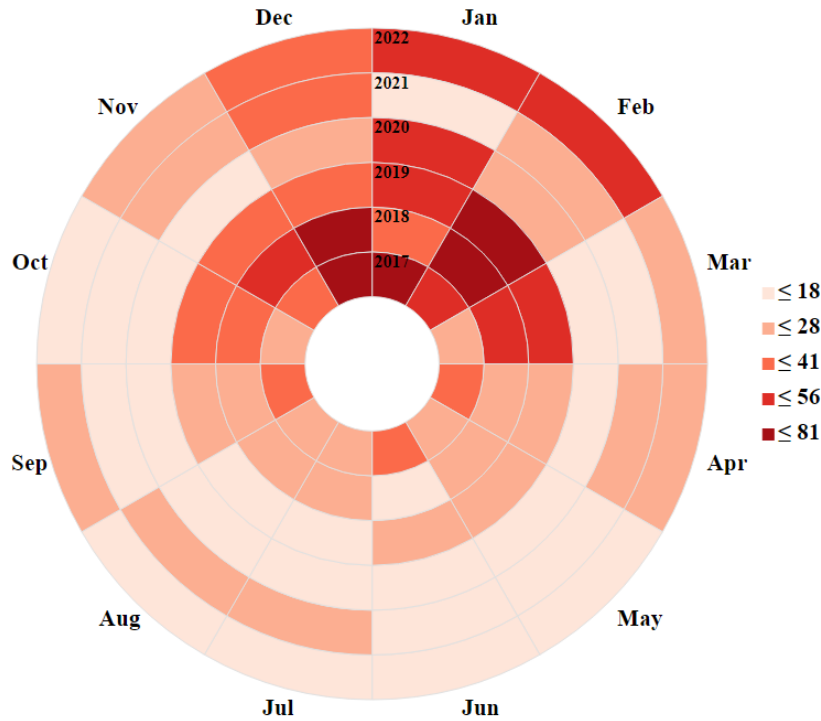
$$Z_I = \frac{I - E_I}{\sqrt{V_I}} \quad (9)$$

Where  $E_I$  and  $V_I$  are Moran's I expected value and variance, respectively.

## Crash Data Analysis

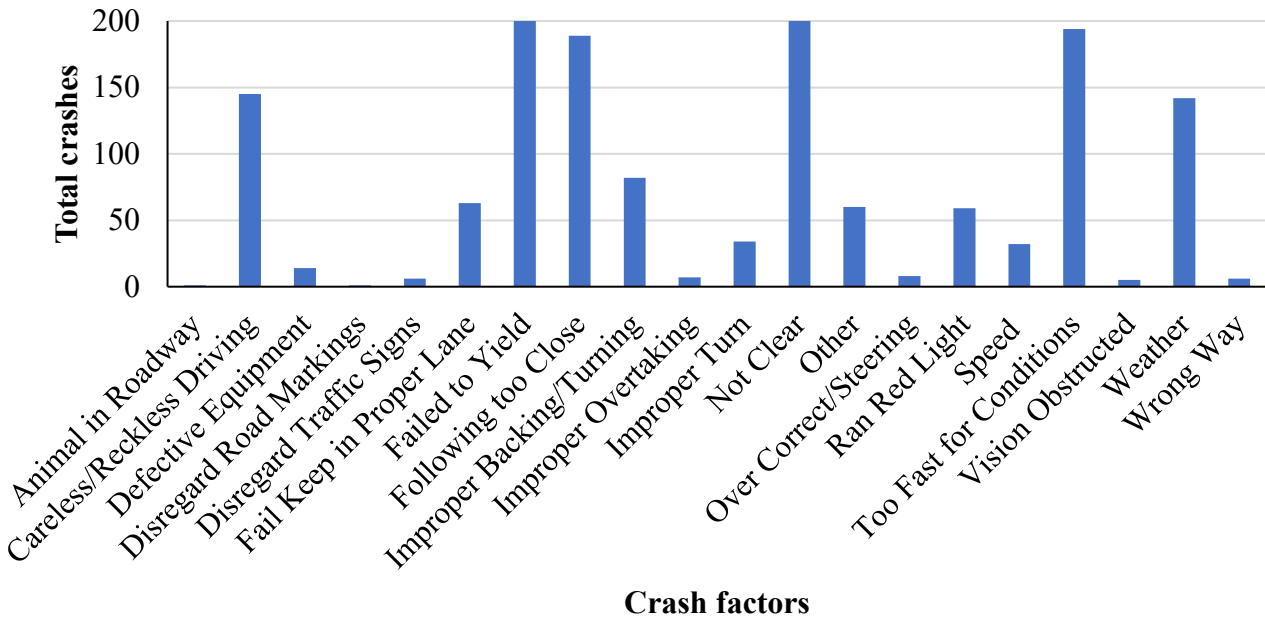
### Preliminary Analysis

Different crash pattern summaries were done before the hot spot area analysis. Figure 6 shows the temporal distribution of crashes in months and years using graduated colors. The months with higher crashes were December, January, and February.



**Figure 6 Number of crashes per month and year data clock**

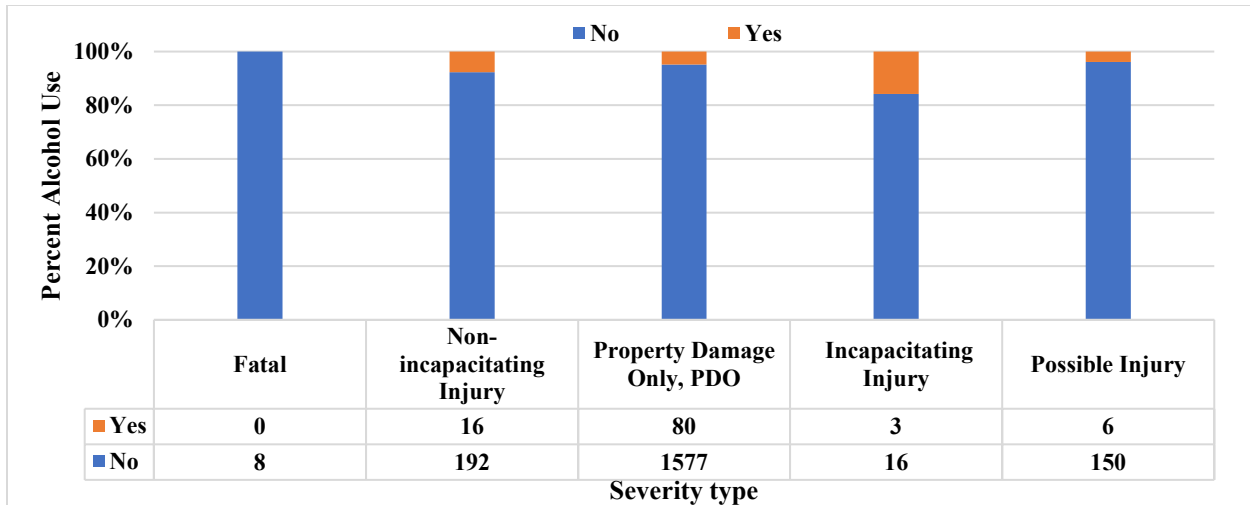
There were more than 22 factors reported as a cause for each accident. Figure 7 presents the total number of crashes caused by each contributing factor except the unknown factors. The reasons for 797 crashes were reported as unknown. The major contributing factors for the crashes were Failure to Yield (16%), Too Fast for Conditions (16%), Following Too Close (15%), Careless Driving (12%), and Weather (11%). The crashes due to Animals in Roadway and Disregard Road Markings were one. According to the NDDOT vision zero initiative definition, speeding includes driving too fast for the conditions, following too close, and recklessly operating a vehicle. Hence the speed-related factors accounted for 45% of the crashes with known causes and 28% of the total reported crashes with known and unknown reasons.



**Figure 7 Crash contributing factors and percent total crash**

Alcohol use increases the possibility of a crash and severity (Beaulieu et al. 2022). Figure 8 presents the number of crashes for the corresponding alcohol use and severity level conditions. Only 5% of the total crashes involved alcohol. The severity level data shows 81% of the crashes were property damage only (PDO), 10% were non-incapacitating injuries, 8% were possible injuries, and 2% were fatal and incapacitating injuries. Most of the fatal crashes involve drivers with no alcohol use. For all severity cases, the number of crashes due to alcohol use is less than no alcohol use. The higher alcohol use rate was seen for incapacitating injuries, where crashes due to alcohol use accounted for 19% of the total incapacitating injuries.





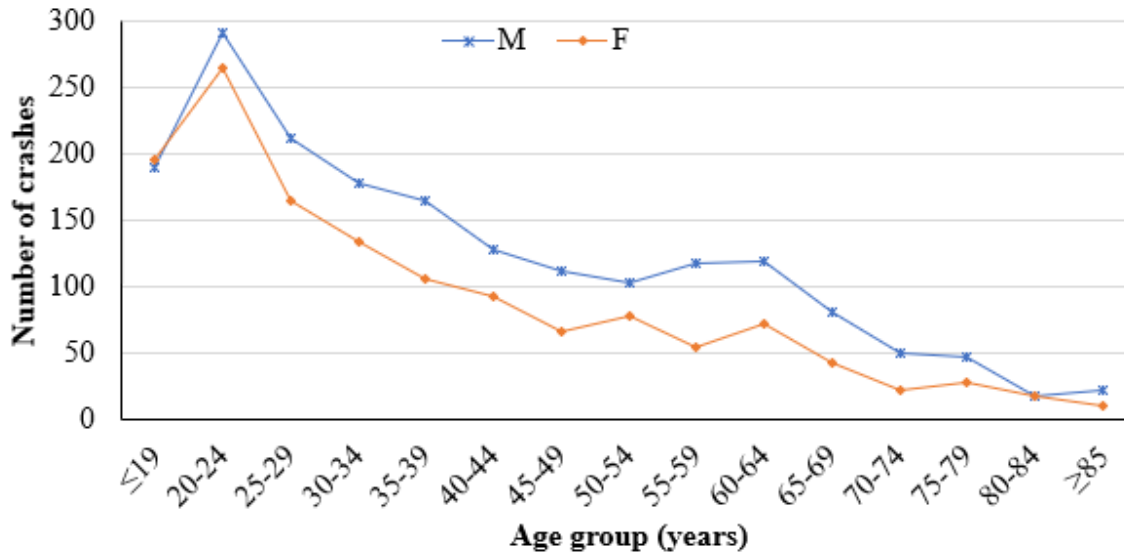
**Figure 8 Percent crash severity levels due to alcohol use**

The safety equipment (seat belts and helmets) that the drivers or passengers used during the crashes could significantly affect the severity level (Egly and Ricca 2023). The safety equipment should be appropriately used to minimize the extent of the injury (Kashani et al. 2022). Table 3 shows the total number of crashes under each safety equipment. The data showed that crashes 63% of drivers involved in crashes use lap and shoulder belts.

**Table 3 Safety equipment use data**

Safety equipment type	Number of crashes
Restraint Use Unknown	1118
Not in Use	43
Lap and Shoulder	2191
Shoulder Belt	27
Helmet Worn	3
Lap Belt Only	40
Not Applicable	32
Child Safety Seat (Prop)	1

Figure 9 depicts the total number of male and female drivers involved in the crash for each age category. The number of male drivers involved was higher in 87% of the age categories. However, the number of female drivers involved in crashes was higher than male drivers for the age category of 19 years and younger. The male and female driver crash exposure was equal for those between 80 and 84 years. There were 3169 drivers involved in traffic crashes.



**Figure 9 Age group and sex of drivers**

The prevailing weather and road surface conditions affect the severity and probability of crash occurrence (Hammad et al. 2019; Malin et al. 2019; Zhai et al. 2019). Table 4 shows the crash scenes under each surface and weather conditions. Unfavorable weather and surface conditions can increase crashes. Of the total crashes, 41% occurred on dry pavement and clear sky conditions, while 17% occurred on icy roads and clear sky conditions.

**Table 4 Road surface and weather conditions during the crash scene**

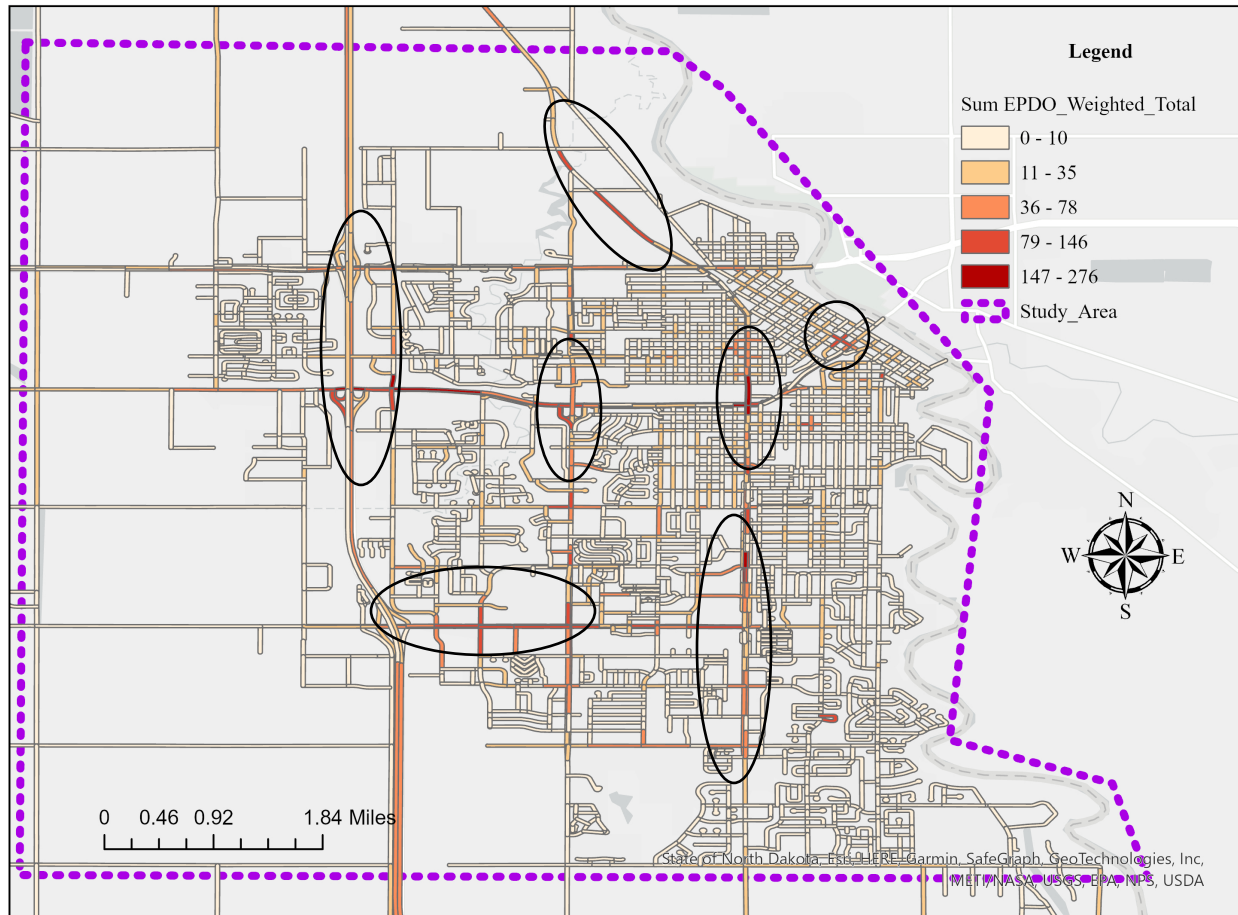
Weather Condition	Surface Condition					
	Dry	Snow	Ice / Compacted Snow	Mud Dirt Gravel	Wet	Slush
Unknown	46	6	11	1	0	0
Clear	841	170	350	0	42	17
Cloudy	110	79	89	0	48	7
Rain	0	0	7	0	46	0
Snow	0	78	26	0	3	7
Blowing Snow	1	14	12	0	0	1
Sleet/Hail/Freezing Rain	0	6	18	0	2	1
Fog / Smoke / Dust	2	0	1	0	3	0
Severe Wind	1	0	1	0	1	0

## Results and Discussions

The results of hot spot areas and spatiotemporal distribution of crashes were summarized in figures using graduated colors.

### Equivalent Property Damage Only (EPDO) Method

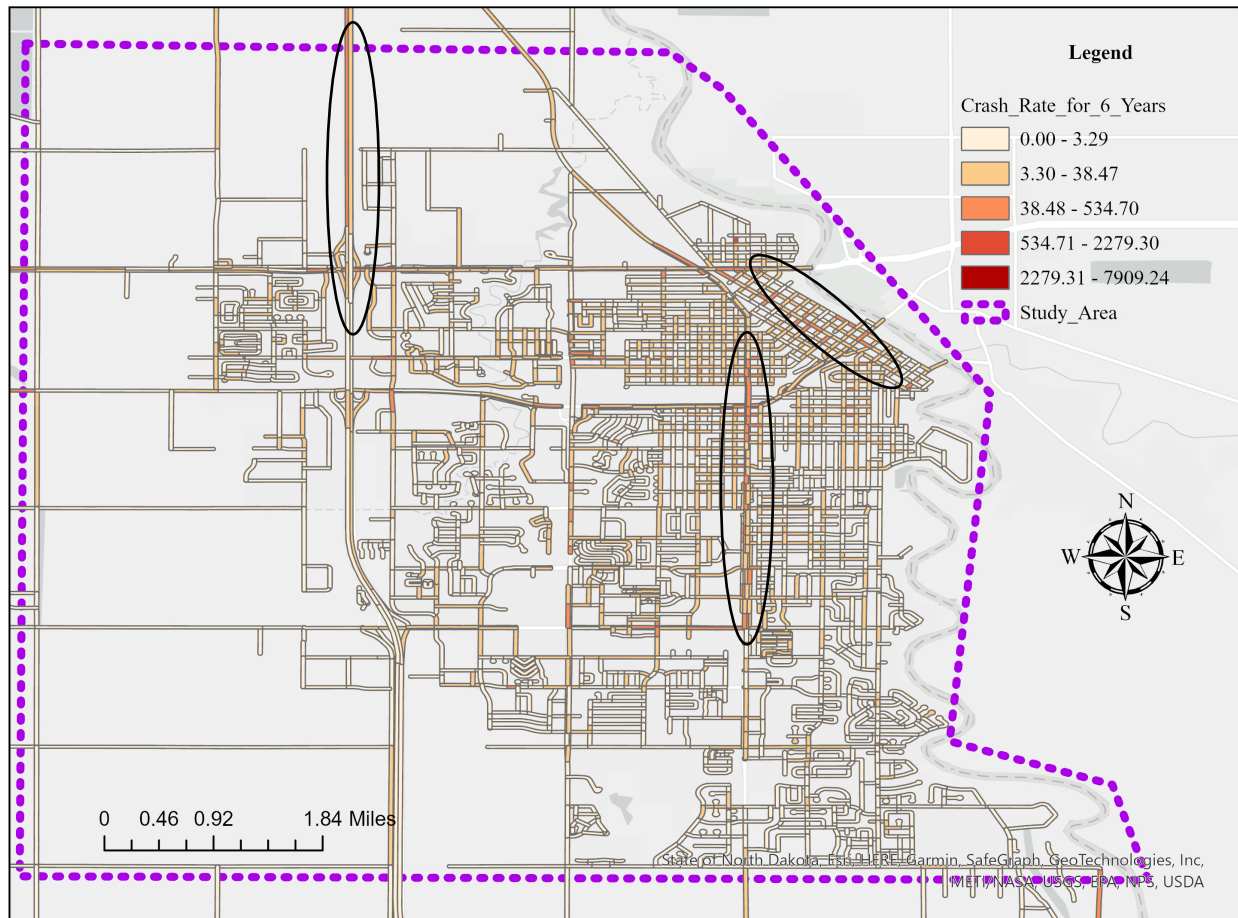
Figure 10 shows the street heat map of GF City. The areas with a higher number of weighted EPDOs are indicated with red colored. The areas with higher EPDO levels were in all city directions, including the central Demers Ave - Columbia Rd intersection. The magnitude of the lowest EPDO values was indicated using yellow and light yellow colors. The results showed a high variability level in crash EPDO values, where 0 and 276 are the minimum and maximum EPDO values, respectively.



**Figure 10 Street heat map (EPDO)**

## Crash Rate (CR) Method

The crash rate was calculated for all street areas, and a graduated color was used to show variation in CR levels. Figure 11 shows the hot spot areas using CR values for each street. The northeast, southeast, and northwest areas of the city had the most crash rates than the other areas. All roads, regardless of the AADT, were ranked and categorized together.



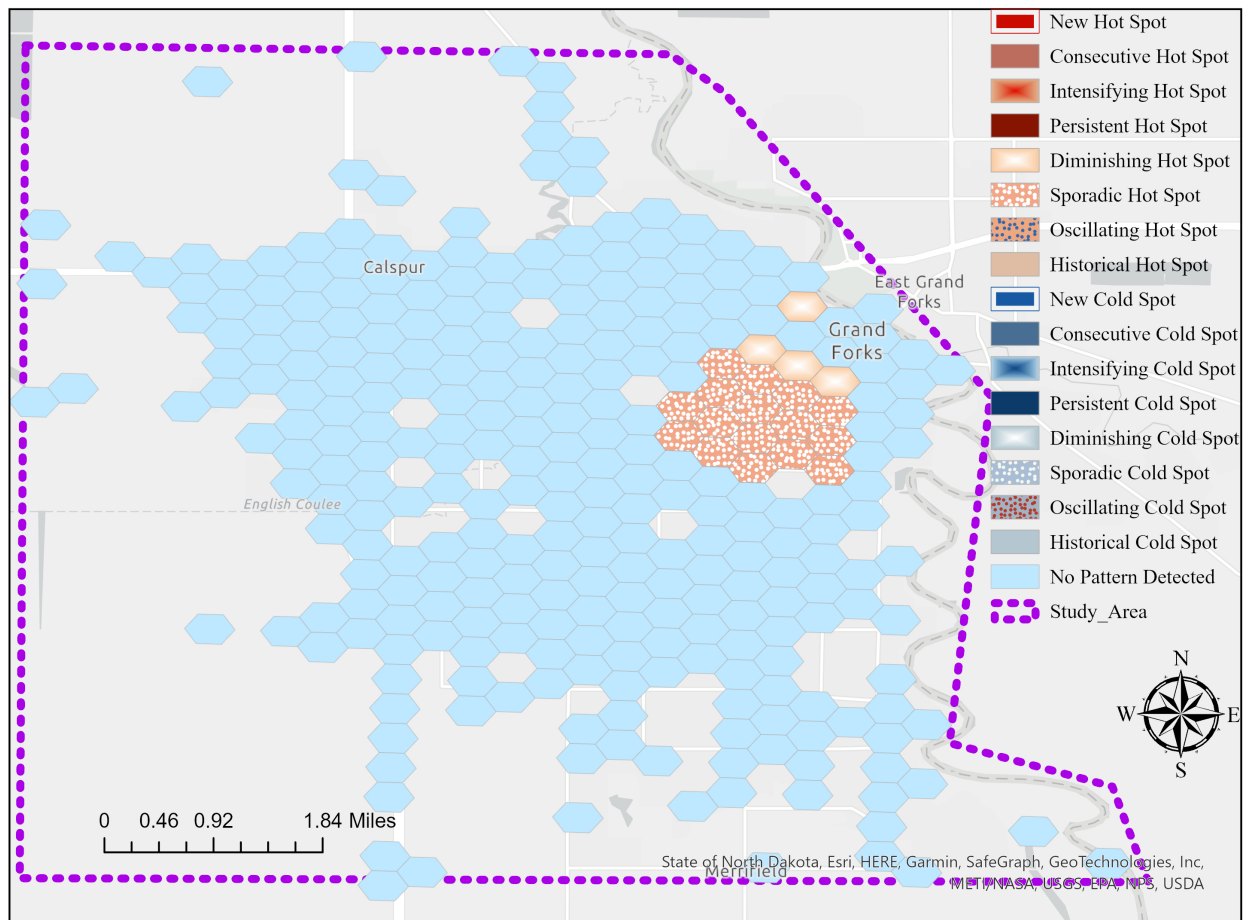
**Figure 11 Street heat map from crash rate**

## Emerging Hot-Spot Analysis

The emerging hot spot analysis (space-time pattern mining) helps to detect the two-dimensional (space and time) clustering of crashes (ESRI 2019). Figure 12 presents the analysis output for the crash study area. It was found that most of the crashes did not show any spatiotemporal distribution and were indicated by the sky-blue color. There were 16 sporadic hot spots and 4 diminishing hot

spot areas. The sporadic areas are defined as spatial bins under observation and continually switch from being a hot spot to not being a hot spot and to being a hot spot again.

On the other hand, the diminishing hot spot areas have been statistically significant for 90% of the time step intervals. In addition, the cluster intensity in each time step of the diminishing hot spot areas decreases statistically. The percent significant hot spot for the diminishing hot spots was 92%, while for the sporadic hot zones, it ranges from 33% to 84%. From this, it can be seen that most areas have random spatiotemporal clusters.

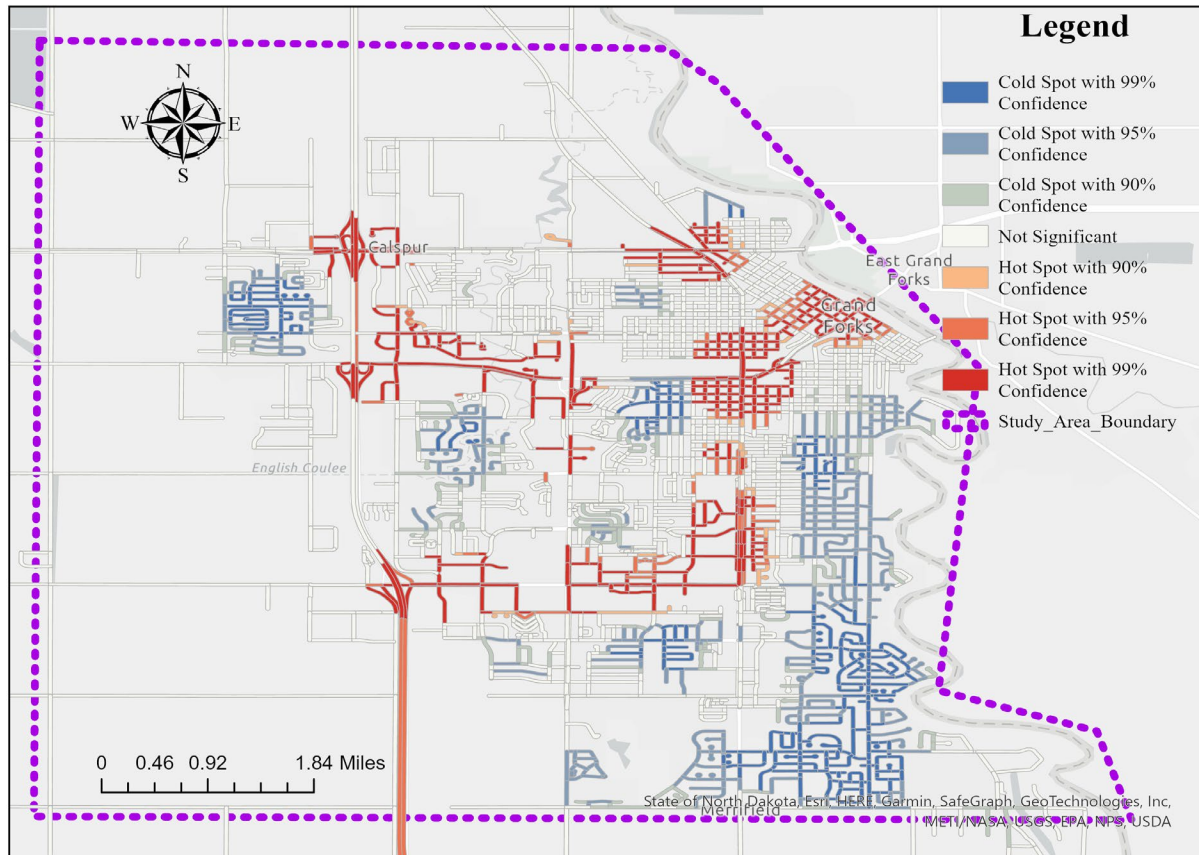


**Figure 12 Emerging Hot-Spot Analysis Output**

### Hot Spot Analysis (Getis-Ord $G_i^*$ )

The Getis-Ord  $G_i^*$  tool helps to evaluate the spatial cluster pattern of hot spot areas. Figure 13 presents the hot spot analysis output. Most streets were cold and hot spots with a 99% CI. The red colored lines on the map were hot spot areas with 99% CI and were seen in all directions except

the southeast. The cold spots were noticed in southeast, central, and northwest GF. The analysis shows that there is a statistically significant spatial clustering of crashes. The presence of spatial clustering of crashes helps to plan in regions with higher clusters.



**Figure 13 Output of Getis-Ord Gi\* Hot Spot Analysis Geoprocessing tool**

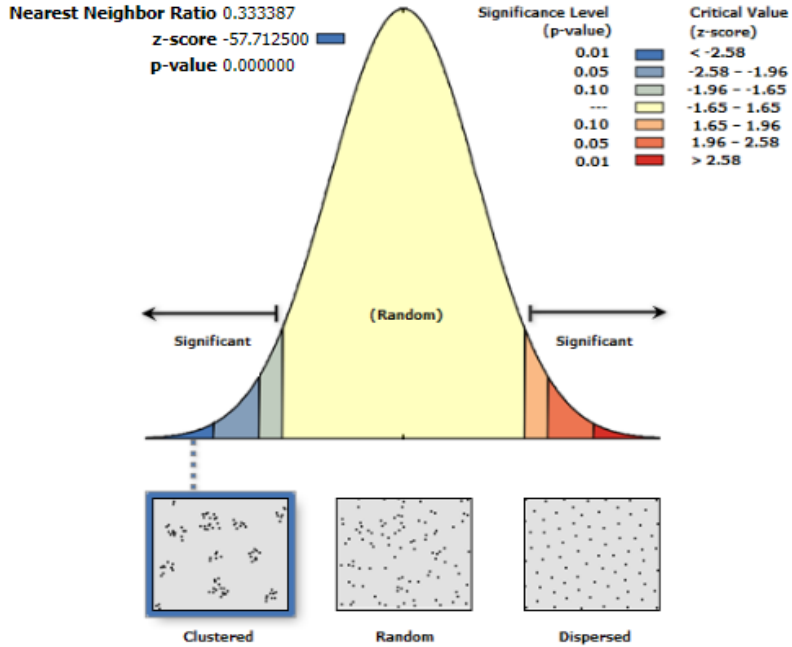
### Spatial Autocorrelation (ANN and Global Moran's I)

Figure 14 a) presents ANN results for the crash locations. The ANN analysis's Z-score (-57.71) was significant at 99% CI. Hence the location is clustered. There was a 99% likelihood that the clustered pattern could result from a random chance. Therefore, the traffic crashes and attributes are spatially clustered.

The Global Moran's I use the I statistic to define spatial autocorrelation. Figure 14 b) shows the autocorrelation summary report for the study area. The I statistic was +0.003, and the overall spatial autocorrelation was statistically significant. The null hypothesis was rejected since the results were clustered. Given the calculated statistic values (I=0.003, Z-score= 1.74, and p-value= 0.08), there is a less than 1% likelihood that this clustered pattern could result from random chance.

a)

### Average Nearest Neighbor Summary



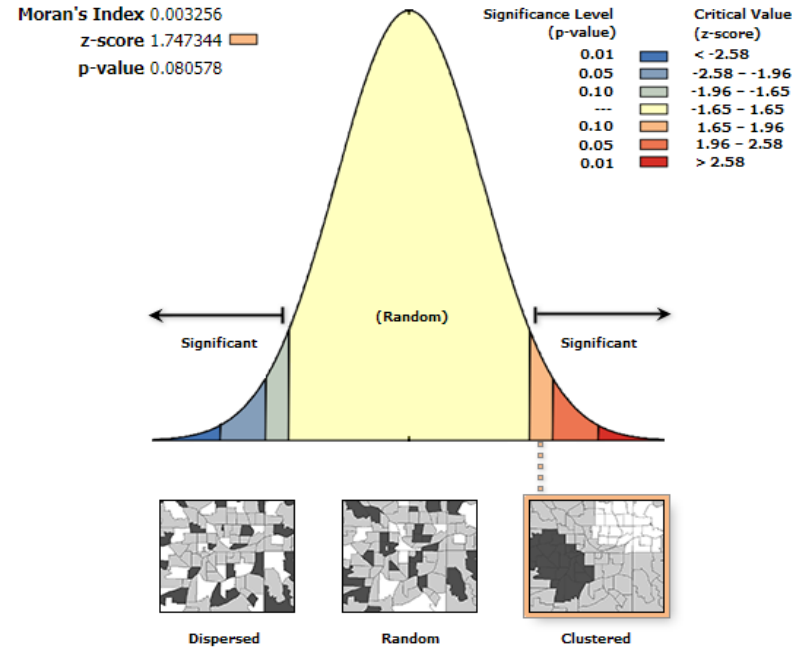
Given the z-score of -57.7125, there is a less than 1% likelihood that this clustered pattern could be the result of random chance.

### Average Nearest Neighbor Summary

<b>Observed Mean Distance</b>	56.5270 Meters
<b>Expected Mean Distance</b>	169.5540 Meters
<b>Nearest Neighbor Ratio</b>	0.333387
<b>z-score</b>	-57.712500
<b>p-value</b>	0.000000

b)

### Spatial Autocorrelation Report



Given the z-score of 1.747344, there is a less than 10% likelihood that this clustered pattern could be the result of random chance.

### Global Moran's I Summary

<b>Moran's Index</b>	0.003256
<b>Expected Index</b>	-0.000297
<b>Variance</b>	0.000004
<b>z-score</b>	1.747344
<b>p-value</b>	0.080578

Figure 14 Cluster analysis result: a) Average nearest neighbor method and b) Spatial autocorrelation (Global Moran's I)

### PART 3: SPEED DATA ANALYSIS AND SAFETY IMPLICATIONS

#### Test Sections

Among the several locations planned for this safety study research project, this report included three sections for traffic speed study. The areas that were expected to have high pedestrian crossing movement were analyzed. Figure 15 presents the map of test sites and their location in reference to Grand Forks City. There were three test sites (left side of the map), such as 6<sup>th</sup> Ave N, S 34<sup>th</sup> St, and S 25<sup>th</sup> St. Due to the location of the pedestrian crossing in reference to the intersection, the east and west speed data at 6<sup>th</sup> Ave N were collected at a separate site (top left map). All of the selected areas are located near either schools or parks. The pedestrians are expected to be high during the school season at peak hours. The speed data were collected for both directions at S 34<sup>th</sup> St and S 25<sup>th</sup> St.

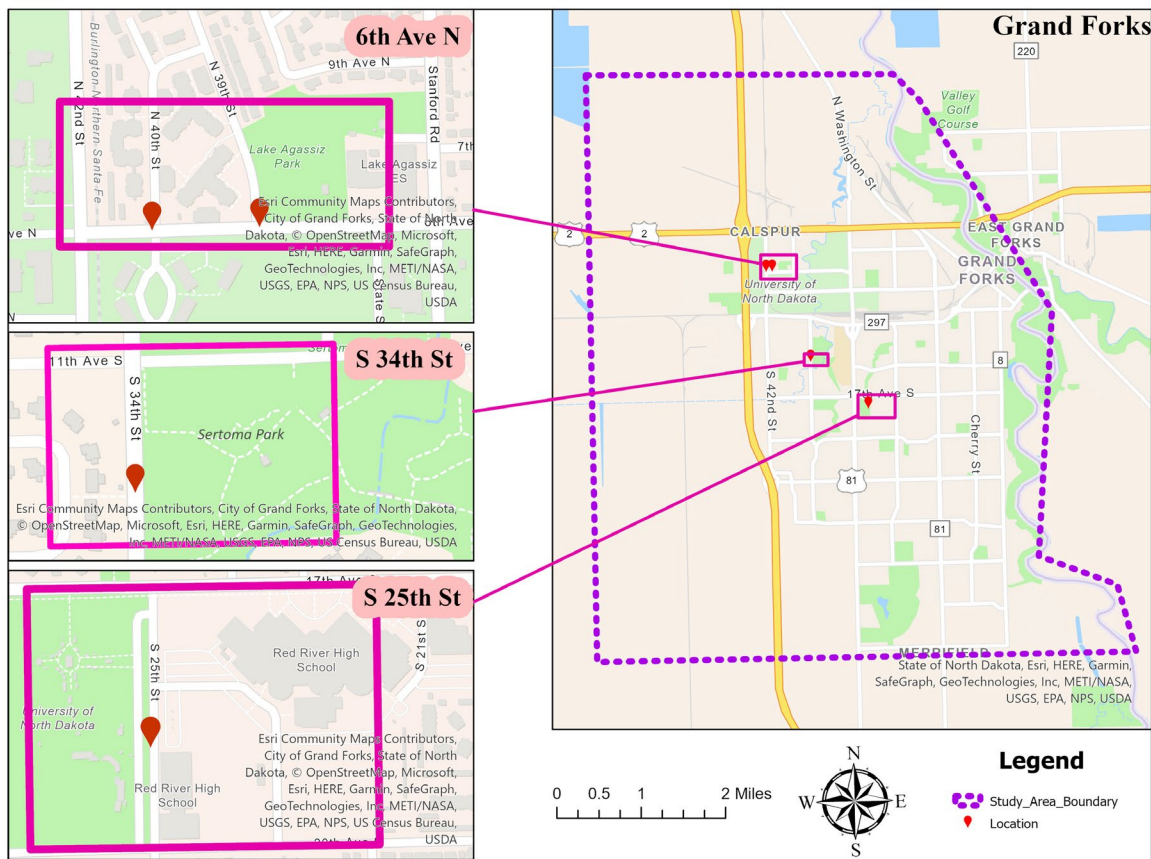
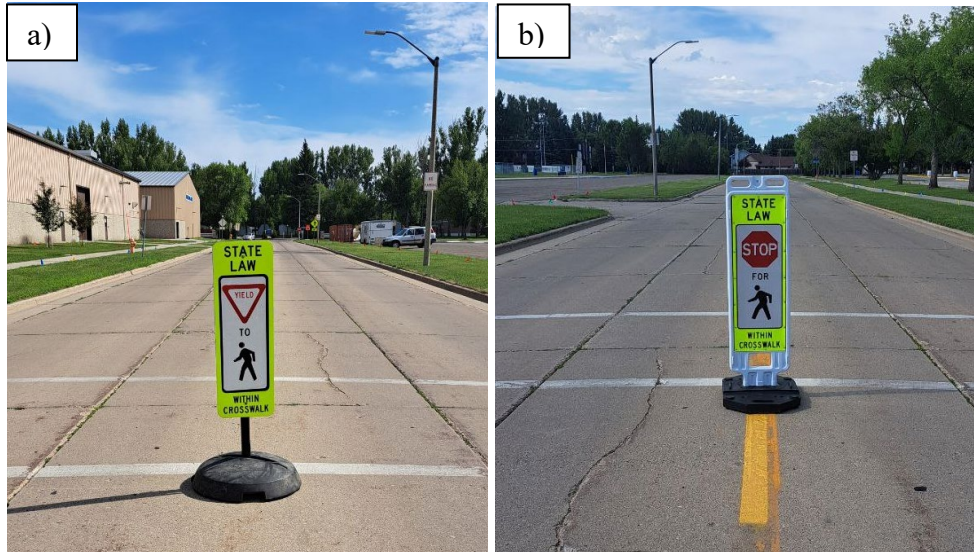


Figure 15 Test Locations for a speed study



Table 5 presents the basic features of the sites selected for the study. The speed data was collected near the intersection of 6<sup>th</sup> Ave N and at the straight section of the road for S 34<sup>th</sup> St and S 25<sup>th</sup> St.

Figure 16 presents the yield and STOP in crosswalk signs. The signs used were per Section 2B.12 of the Manual on Uniform Traffic Control Devices for Streets and Highways, MUTCD (FHWA 2010). The signs were located at the center line of the road at the crosswalk location. The signs have a dimension of 12x36 inches.



**Figure 16 In Crosswalk signs a) Yield to Pedestrians and b) STOP to Pedestrians at S 25<sup>th</sup> St (0 ft)**

**Table 5 Test Sections Features**

Location Name	Number of Lanes	AADT	Posted Speed Limit (PSL)
6 <sup>th</sup> Ave N	Two lanes with a turning lane	3908	25
S 34th St (Sertoma Park)	Two lane	3160	30
S 25th St (Red River School - Eagles Arena)	Two lane	1550	20



## **Specific Objectives**

The principal objectives of this study were:

- To evaluate the impact of crosswalk yield and STOP signs on traffic speed, and
- To assess the safety implications of the signs on road users.

## **Data Collection**

### **Yield and STOP to Pedestrians**

Yield and STOP to pedestrian data has been collected for all locations since May 2023. The approach for collecting the yield or STOP information has been achieved by placing the signs at the center line road mark and varying the distance of the signs from the edge of a pedestrian crossing. So far, the data was collected at a distance of 0 ft from the edge. The data was collected in the morning and afternoon (for the peak hour) to compare the effect of the sign on yielding behavior. The data were collected at intervals of 15 minutes to minimize the temporal distribution effect of data (Gedafa et al. 2014). The data was collected was out of the driver's sight to minimize vehicle and pedestrian movement and speed change.

Due to the small number of pedestrians during the summer season, the size of the collected yielding data was not enough to make statistical comparisons and is not included in this report.

### **Traffic Speed**

At all locations, traffic speed was collected at the pedestrian crossing location. A Decatur Doppler Handheld traffic radar speed gun was used. The data was collected for each direction and with and without sign conditions. To consider the effect of temporal variability, data was collected in 15-minute intervals. To minimize the interference of pedestrians and bicyclists, the speed data were collected in the early morning and late afternoon (Gedafa et al. 2014). The speed data recorded when pedestrians approached and appeared at the crossing was not part of the speed analysis.

## **Methodology**

### **Significant difference test for traffic Speed**

An independent t-test was used to check the significance of differences with and without conditions. The independent t-test helps to test a hypothesis regarding the means of the same

variable for different samples (Ross and Willson 2018). The null hypothesis states that the means of the two samples are equal. The null hypothesis can be rejected if the p-value is less than the selected significance level ( $\alpha=1-CI=1-0.95=0.05$ ). A type I error was used for all statistical difference tests.

## **Results and Discussions**

### **Speed Data Analysis Results**

The effect of Yield to Pedestrians in Crosswalks and STOP to Pedestrians in Crosswalks on the speed of the moving traffic is analyzed. Table 6 shows the effect of Yield to Pedestrians in Crosswalks signs on traffic speed. The results were seen in reference to the average, 85<sup>th</sup> percentile, maximum, and minimum speed of vehicles with and without the yield sign. The traffic in each direction of the selected routes and the time of the day were also considered for comparison. The standard deviation (SD) and coefficient of variation (CV) of the speed varied approximately from 3 mph to 5 mph and 9% to 20%, respectively. The average speed was lower than the PSL except for the westbound movement of 6th Ave N in the afternoon. The results imply safety of the drivers and pedestrians would be improved in the presence of yield signs.

Table 7 shows the effect of STOP Pedestrians in Crosswalks on traffic speed. The results indicated that the STOP sign condition has relatively lower speed values than the with conditions. Only the 85<sup>th</sup> percentile speed of the with condition for the southbound movement of S 34<sup>th</sup> St in the morning is higher than the without condition. However, the average, minimum, and maximum speed values were lower for all locations, directions, and times of the day. Hence the effect of the time of the day and direction was not significant. At S 34<sup>th</sup> St, the interval for the variation of SD and CV were approximately from 3 mph to 5 mph and from 10% to 19%, respectively. For S 25<sup>th</sup>, the SD varies from 3 to 5mph, while the CV varies from 9% to 21%.

**Table 6 Effect of Yield Sign on Traffic Speed**a) 6<sup>th</sup> Ave N with PSL of 25 mph

Statistic	East Bound (6 <sup>th</sup> Ave N - N40 <sup>th</sup> St)				West Bound (6 <sup>th</sup> Ave N - N39 <sup>th</sup> St)			
	Morning		Afternoon		Morning		Afternoon	
	Without	With	Without	With	Without	With	Without	With
Average speed (mph)	25	23	25	23	28	25	28	26
85th Percentile Speed (mph)	28	26	29	27	31	29	31	29
SD (mph)	3.27	3.15	4.04	4.06	3.69	4.30	3.38	3.83
CV (%)	10.68	9.94	16.33	16.51	13.63	18.51	11.42	14.70
n	193	168	138	152	129	128	155	158
Minimum (mph)	16	16	12	12	17	12	17	12
Maximum (mph)	35	32	37	34	39	36	37	36

b) S 34<sup>th</sup> St (Sertoma Park) with PSL of 30 mph

Statistic	North Bound				South Bound			
	Morning		Afternoon		Morning		Afternoon	
	Without	With	Without	With	Without	With	Without	With
Average speed (mph)	29	27	29	27	30	27	30	27
85th Percentile Speed (mph)	32	30	33	30	32	31	34	31
SD (mph)	3.43	3.85	3.62	3.94	3.25	3.75	3.86	4.14
CV (%)	11.74	14.80	13.12	15.51	10.53	14.10	14.93	17.15
n	114	98	104	94	69	79	95	87
Minimum (mph)	20	15	20	15	24	15	22	12
Maximum (mph)	39	40	38	39	44	34	45	36

c) S 25<sup>th</sup> St (Red River School - Eagles Arena) with PSL of 20 mph

Statistic	North Bound				South Bound			
	Morning		Afternoon		Morning		Afternoon	
	Without	With	Without	With	Without	With	Without	With
Average speed (mph)	25	23	25	23	25	22	25	24
85th Percentile Speed (mph)	29	28	29	27	29	26	28	28

SD (mph)	4.49	4.21	4.01	3.67	3.58	4.67	2.89	3.87
CV (%)	20.17	17.71	16.06	13.45	12.84	21.85	8.33	14.97
n	50	63	56	67	57	55	84	58
Minimum (mph)	15	15	16	15	17	13	17	16
Maximum (mph)	39	33	35	34	34	32	32	34

**Table 7 Effect of STOP Sign on Traffic Speed**

a) S 34<sup>th</sup> St (Sertoma Park) with PSL of 30 mph

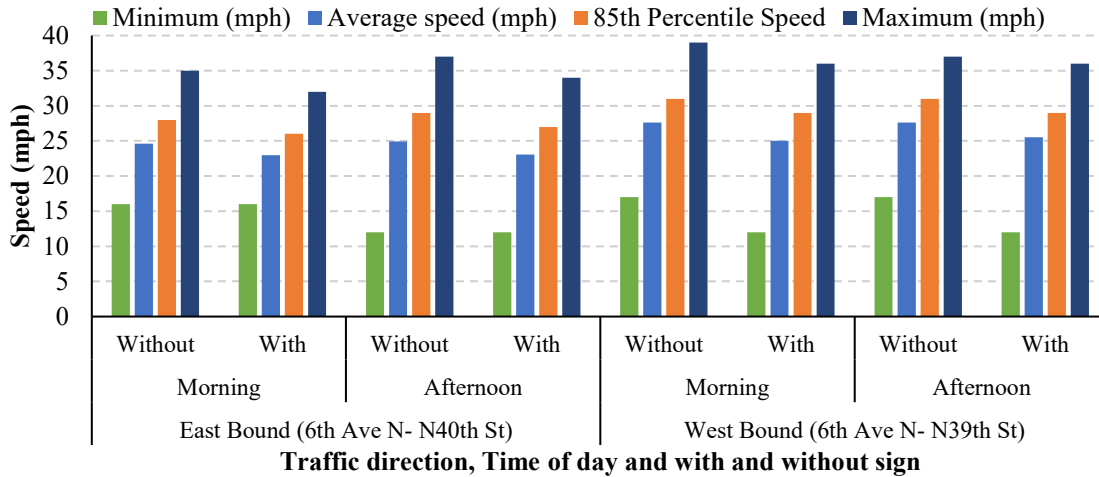
Statistic	North Bound				South Bound			
	Morning		Afternoon		Morning		Afternoon	
	Without	With	Without	With	Without	With	Without	With
	Average speed (mph)	31	28	30	26	30	28	30
85th Percentile Speed (mph)	35	31	34	31	32	33	32	31
SD (mph)	3.53	3.60	3.66	4.45	3.25	4.24	4.11	4.16
CV (%)	12.43	12.99	13.39	19.82	10.53	17.99	16.85	17.32
n	53	80	71	76	69	60	96	94
Minimum (mph)	23	17	23	14	24	21	20	15
Maximum (mph)	39	36	42	36	44	38	50	40

b) S 25<sup>th</sup> St (Red River School - Eagles Arena)

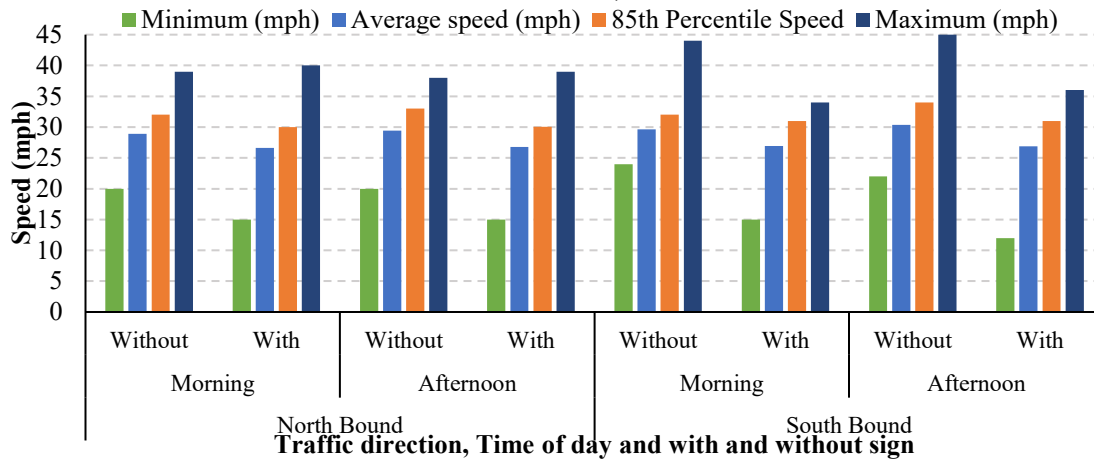
Statistic	North Bound				South Bound			
	Morning		Afternoon		Morning		Afternoon	
	Without	With	Without	With	Without	With	Without	With
	Average speed (mph)	25	23	25	22	25	22	25
85th Percentile Speed (mph)	29	28	29	25	30	26	28	28
SD (mph)	4.53	4.27	3.97	3.17	3.55	4.59	3.13	4.02
CV (%)	20.56	18.25	15.73	10.07	12.59	21.06	9.81	16.18
n	49	52	54	56	44	50	68	58
Minimum (mph)	15	16	16	15	18	13	18	16
Maximum (mph)	39	33	35	29	34	30	35	34

Figure 17 shows the speed variation due to yield signs for each direction and time of the day. The results showed that the presence of the yield sign has lower speed values than without the sign condition. The speed reduction with the yield sign was consistent at all locations and directions. Though the speed values for the time of the day and traffic direction were different, the speed pattern for with and without yield sign conditions is similar. The average speed for S 25<sup>th</sup> St was higher than the PSL in all cases.

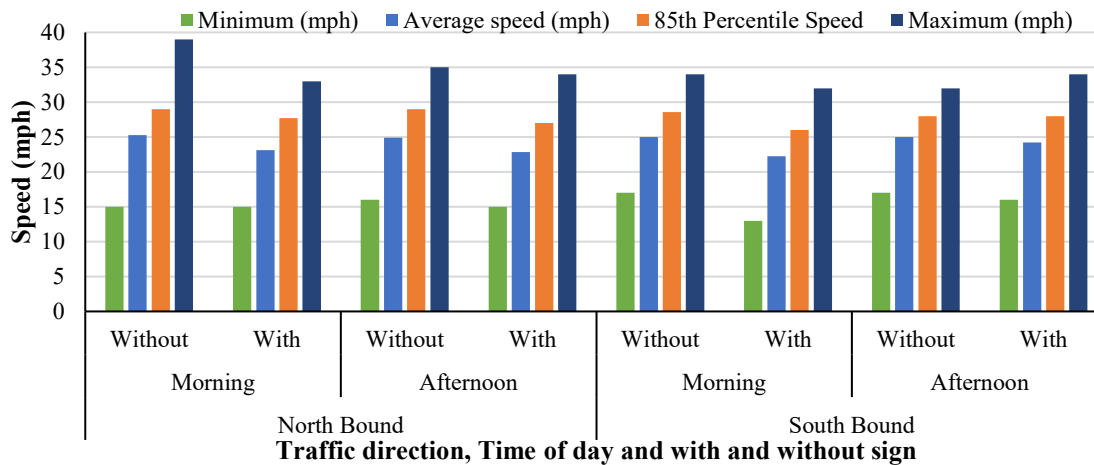
Figure 18 presents the variation due to the STOP sign. The average and minimum speeds in all locations and cases were lower than the PSL. For S 34<sup>th</sup> St, the 85<sup>th</sup> percentile speeds were relatively higher than the PSL, showing that more than 15% of vehicles were moving above the posted speed. In contrast, for S 25<sup>th</sup> St, both the average and 85<sup>th</sup> percentile speeds were higher than the PSL. Reducing average speed due to the STOP signs in crosswalks would lower the risk of traffic crashes.



a)



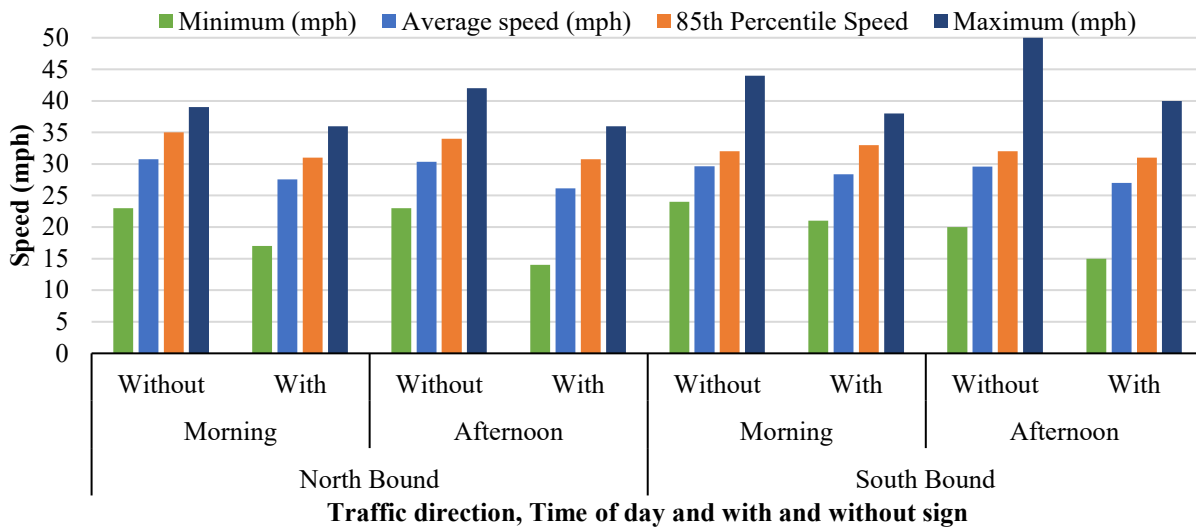
b)



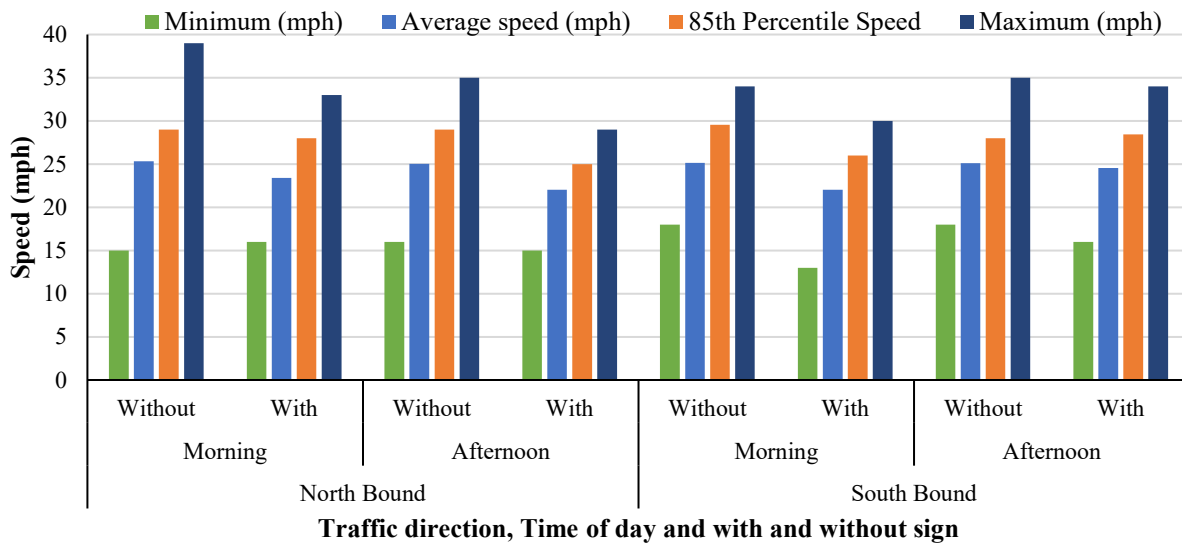
c)

**Figure 17 Effect of Yield Sign on Traffic Speed: a) 6<sup>th</sup> Ave N, b) S 34<sup>th</sup> St - Sertoma Park, c) S 25th St (Red River School - Eagles Arena)**





a)



b)

**Figure 18 Effect of STOP Sign on Traffic Speed: a) S 34<sup>th</sup> St (Sertoma Park), b) S 25<sup>th</sup> St (Red River School - Eagles Arena)**

Table 8 presents the statistical summary at all locations for the yield and STOP signs, respectively. An independent t-test with 95% was used to test the significance of the speed variation for the with and without conditions, including the combined case. For the with and without Yield sign, the variation in speed was statistically significant for 92% of the cases. However, 100% of the cases were statistically different for the combined analysis. For the with and without STOP sign condition, 75% of the individual cases were significant, and 100% significant for the combined case. These findings indicate that yield and STOP signs significantly affected the traffic speed and could minimize the number and severity of crashes.

**Table 8 Significance difference test for Traffic Speed: With and Without Yield Sign and STOP Sign**

Location	Direction	Time	Yield sign				Sig. Diff (95% CI)
			Without		With		
			Avg Speed (mph)	n	Avg Speed (mph)	n	Check!
6 <sup>th</sup> Ave N	EB (6th Ave N- N40th St)	M	24	168	22	153	Yes
		A	25	161	23	145	Yes
	WB (6th Ave N- N39th St)	M	28	129	25	128	Yes
		A	28	155	25	158	Yes
S 34th St (Sertoma Park)	NB	M	32	114	30	98	Yes
		A	33	104	30	94	Yes
	SB	M	30	69	27	79	Yes
		A	30	95	27	87	Yes
S 25th St (Red River School - Eagles Arena)	NB	M	25	50	23	63	Yes
		A	25	56	23	67	Yes
	SB	M	25	57	22	55	Yes
		A	25	84	24	58	No
<b>Overall</b>							
Combined (S 34th St – S 25th St)	NB	M	27.80	164	25.14	161	Yes
		A	27.84	160	25.24	161	Yes
	SB	M	27.54	126	25.00	134	Yes
		A	27.83	179	25.83	145	Yes
<b>STOP sign</b>							
Location	Direction	Time	STOP sign				Sig. Diff (95% CI)
			Without		With		
			Avg Speed (mph)	n	Avg Speed (mph)	n	Check!
S 34th St (Sertoma Park)	NB	M	35	53	31	80	Yes
		A	34	71	31	76	Yes
	SB	M	30	69	28	60	No
		A	30	96	27	94	Yes
S 25th St (Red River School - Eagles Arena)	NB	M	25	49	23	52	Yes
		A	25	54	22	56	Yes
	SB	M	25	44	22	50	Yes
		A	25	68	24	58	No
<b>Overall</b>							
Combined (S 34th St – S 25th St)	NB	M	28.14	102	25.91	132	Yes
		A	28.04	125	24.39	132	Yes
	SB	M	27.88	113	25.48	110	Yes
		A	27.96	152	25.98	152	Yes

## **CONCLUSIONS**

The following conclusions can be made based on the findings of the study;

- The traffic crashes were found to be spatially clustered,
- The cold spot locations were in the southeast, central, and northwest parts of GF; while most of the clustered hot spots were found in the northeast and central parts of GF.
- There was spatiotemporal clustering in the northeast (close to the east) part of GF, while the crashes in other areas did not have significant cluster patterns.
- The average and 85<sup>th</sup> percentile speed was lower when there was a yield sign which could improve the safety of road users.
- The average and 85th percentile speeds decreased when the crosswalk STOP sign was present, which could minimize the risk and probability of speed-related traffic crashes.

## **FUTURE WORKS**

- The traffic speed and yield study will continue at other sites. The sites will be selected based on the crash hot spot analysis results for streets.
- Analysis and screening of streets with major hot spots will be done. The hot spot analysis will target streets and intersections.
- Analysis for signal warrants at intersections will be done. The hot spot analysis result will be used as an initial criterion.

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APPENDIX

Table A.1 Speed and yield data collection sheet

**Traffic Data Collection Sheet**

Date     /     /        Direction        Location        Posted Speed    

Start at        End at        Yield sign location        M  A

Yield Score Legend	
1	Yielding
2	Not yielding
3	Driver pedestrian conflict
4	Trapped (for pedestrians)

No.	Without		With		Without		With		Without		With		Without		With	
	Speed	Yield Score	Speed	Yield Score	Speed	Yield Score	Speed	Yield Score	Speed	Yield Score	Speed	Yield Score	Speed	Yield Score	Speed	Yield Score
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																



**MPO Staff Report**  
**Technical Advisory Committee:**  
July 12, 2023  
**MPO Executive Board:**  
July 19, 2023

**RECOMMENDED ACTION:** Update on the Urban Area Boundary and MPO Study Area.

**TAC RECOMMENDED ACTION:**

Matter of the MPO Study Area boundary and the Adjusted Federal Aid Urban Area Boundary.

**Background:**

About two years after the Census is done the Census puts out what areas fit their criteria for Urban Areas. For the 2020 Census everything has been late. On December 29, 2022, the Census put out the new Urban Area boundaries. FHWA uses these boundaries and population counts to determine new MPOs and Transportation Management Areas (TMAs). MPOs can adjust the Census boundaries so that they include what the locals consider urban. This will impact what roads will be considered urban roads into the future. This work also needs to be completed by December 29, 2023.

In May, the TAC and Executive Board approved the draft map of the adjusted urban boundary and the MPO study area. The map that was approved is map A. This was submitted to NDDOT before the June 1<sup>st</sup> deadline they had for the draft boundaries.

After they did an initial review of the draft boundaries, they commented on the concern that some of the lines of the boundaries were not far enough away from the other boundaries to be distinguished as encompassing the needed boundaries. The concern was that there would be confusion as to whether or not a boundary was within the adjusted urban boundary or MPO study area like it should be.

The boundaries were moved to make it clear that the needed boundaries were included in the draft adjusted urban area and the MPO study area. What was sent back to NDDOT was Map B.

NDDOT has set a deadline of September 1<sup>st</sup> for them to receive the final adjusted urban area and MPO study area boundaries. As of now MPO staff has not heard of any issues or received any comments back that need to be addressed. Staff wanted to inform the TAC and the Executive board on progress to date. In order to keep NDDOT's deadline for final boundaries, staff would like your input on Map B as to any changes that should be

incorporated into the final boundaries. The final boundaries will be brought forward in our August meeting for adoption.

**Findings and Analysis**

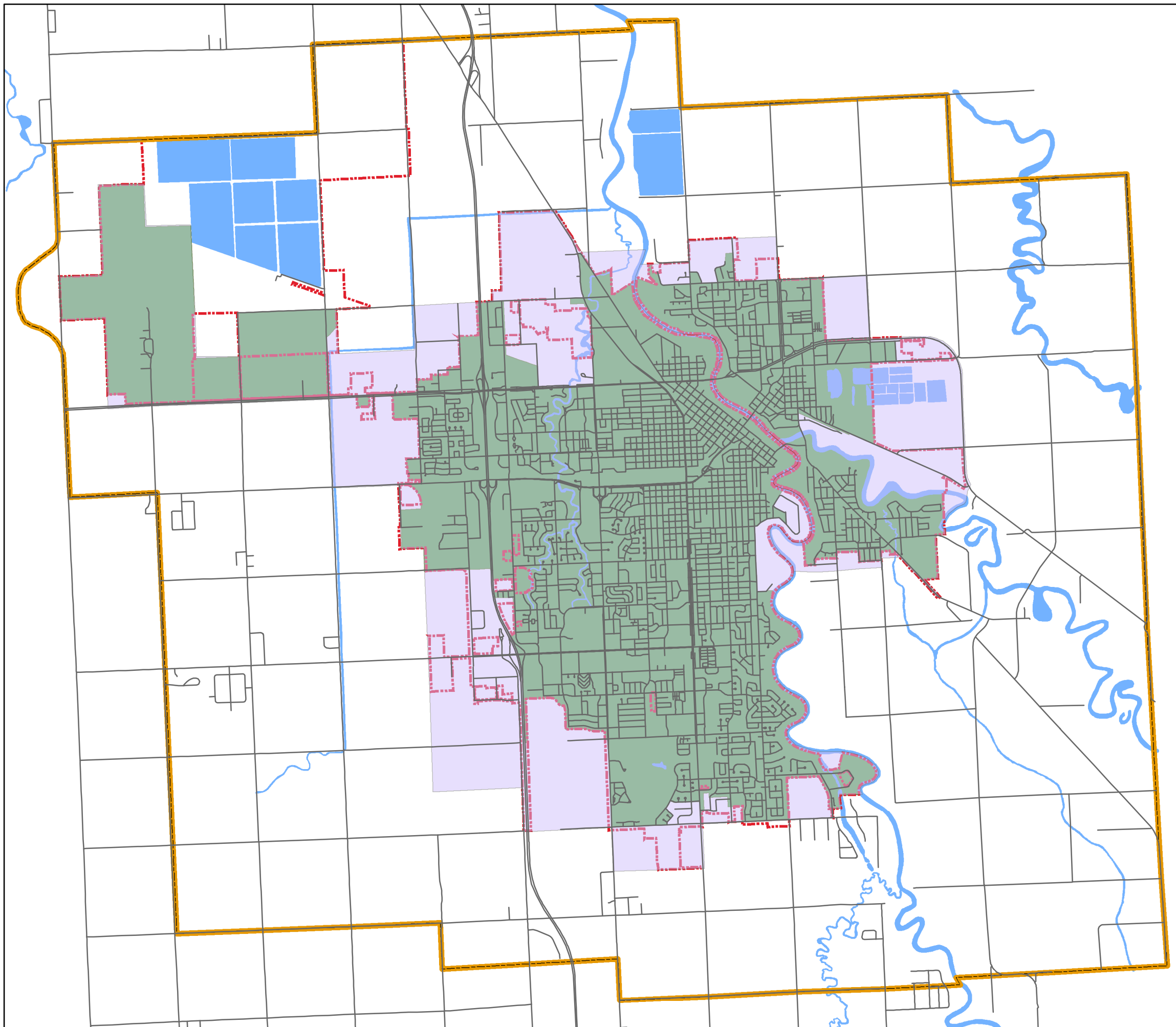
- Waiting on official comments from NDDOT and Federal partners.
- NDDOT will send comments back for final approval by TAC and Executive Board.
- All information for Final MPO Adjusted Federal Aid Urban Area Boundary is due to NDDOT by September 1<sup>st</sup>.







**Support Materials:**

- Maps A & B

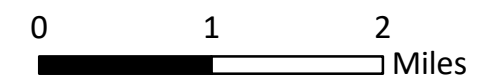


# Draft GF-EGF MPO Study Area & Adjusted Urban Area

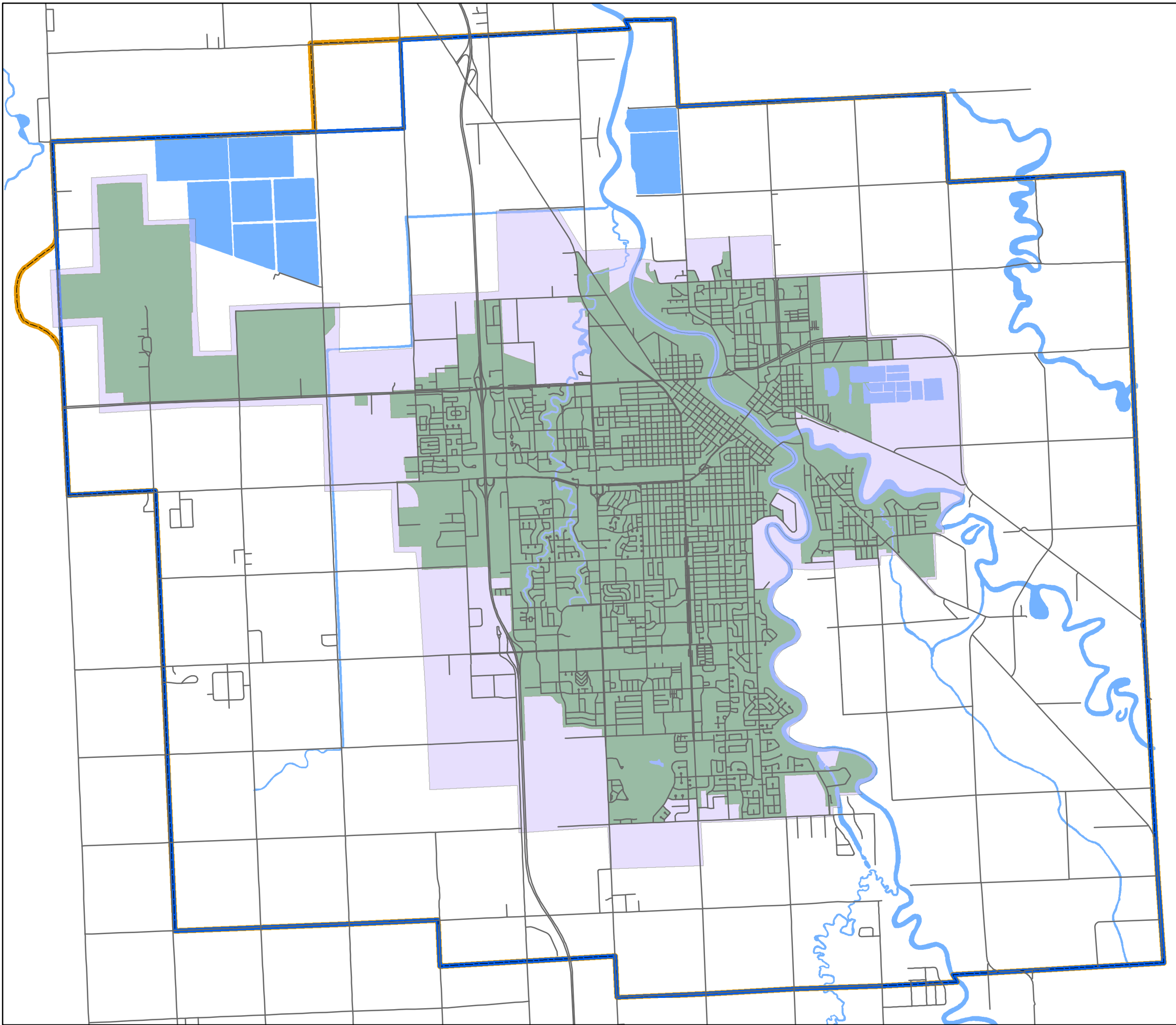








-  2020 Census Urban Area
-  Current City Limits
-  Draft Adjusted Urban Area
-  Draft MPO Study Area
-  Roads
-  Water

**Map A**

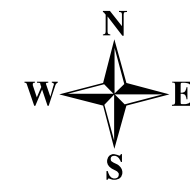
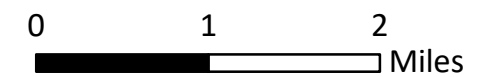


# Draft GF-EGF MPO Study Area & Adjusted Urban Area



-  The Forks MPO Boundary
-  2020 Census Urban Area
-  Draft Adjusted Urban Area
-  Draft MPO Study Area
-  Roads
-  Water

**Map B**





**MPO Staff Report**  
**Technical Advisory Committee:**  
**July 12, 2023**  
**MPO Executive Board:**  
**July 19, 2023**

**RECOMMENDED ACTION:** Discussion of the 2023-2024 and the 2024-2025 Unified Planning Work Program.

**TAC RECOMMENDED ACTION:**

Matter of the discussion of the 2023-2024 and the 2024-2025 Unified Planning Work Program (UPWP).

**Background:**

The 2023-2024 Unified Planning Work Program (UPWP) was adopted in December 2022. The UPWP identifies the work activities the MPO will accomplish during the two-year period, as well as the funding sources that will be available to complete these activities.

Even though both Minnesota and North Dakota have moved to single year contracts, the MPO will continue with two-year UPWP's. One change we will make with the UPWP's is that it will be a rolling two-year UPWP's. Currently we are working from the 2023-2024 UPWP. We will be bringing forward the 2024-2025 UPWP in August/September. As we plan and prepare this document, we need to hear from our partners:

- on a priority list of studies for the coming years. Think big and small, you never know what kind of funding opportunities might come up.
- what has worked in the past or hasn't worked. For example, timeline and the information in the documents. Does the plans supply you with the information you need?

**Support Materials:**

- UPWP [2023-2024UPWPFINALWITHCONTRACT.pdf \(civiclive.com\)](#)
- 2023-2024 UPWP

# **100.1 PROGRAM ADMINISTRATION**

## **100.1 GENERAL ADMINISTRATION**

### **Objective:**

To administer and manage the Metropolitan Planning Organization's staff and selected consultants. This means empowering the staff to become more responsible for initiation, execution, and follow-up on elements of the work program. It will include staffing, supervision, and program management to ensure that programs are efficiently and effectively managed.

### **Proposed Work:**

Administrative activities include coordinating and managing the GF-EGF MPO accounts, records, and contracts. This element will include all activities normally associated with general administration, personnel supervision, and program management. The contracts include the Federal Transit Administration (FTA) and Federal Highway Administration (FHWA) grants received as pass-through from the States of Minnesota and North Dakota. An additional contract is signed annually with the Minnesota Department of Transportation (MnDOT) for a small amount of Minnesota State funds. The amount of funds received by federal, or state agencies can be found in Tables 10 through 13.

Salary costs billable to this item include such administrative tasks as maintaining the GF-EGF MPO's personnel records, performing performance evaluations and filing.

### **Products:**

- Human resource activities are needed to maintain, evaluate, and complete all necessary personnel items and products. Office filing and other general office management duties are done under this task.

### **Completion Date(s):**

- Ongoing activity.

<b>Planning Factors</b>	Economic Vitality, Safety, Accessibility & Mobility, Environment & Community, Efficiency, Preservation, Resilience & Reliability		
<b>Planning Emphasis Areas</b>	Public Outreach, PELS		
<b>2023 Task Effort</b>	<b>Total Cost</b>	<b>Staff Hours</b>	<b>Consultant Fee</b>
	\$54,259	955	\$0.00
<b>2024 Task Effort</b>	<b>Total Cost</b>	<b>Staff Hours</b>	<b>Consultant Fee</b>
	\$60,000.00	1030	\$0.00

## **100.2 UNIFIED PLANNING WORK PROGRAM DEVELOPMENT**

### **Objective:**

To implement, amend, and update, as necessary, the 2023-2024 Unified Planning Work Program (UPWP) for the GF-EGF MPO. To prepare the 2025-2026 UPWP for the GF-EGF MPO.

### **Proposed Work:**

Project solicitation will remain open, and amendments or additional work activities will be added as required. In anticipation of unidentified work elements, additional funding will be programmed under technical assistance. Requests will be reviewed and submitted to the GF-EGF MPO Technical Advisory Committee (TAC) for approval. The major request will be followed by authorization of the GF-EGF MPO Executive Policy Board. The preparation of minutes for the Executive Policy Board and its Finance Committee, as well as the TAC, will also be part of this task.

The resources to hold the monthly Technical Advisory Committee (TAC) and Executive Policy Board meetings are products of this activity. These include assembling the agenda packets, scheduling the meeting room logistics and preparing accurate minutes.

Narratives will be completed for each task in the Annual Work Program for the Mid-Year Report and the Final Report. Other products include minutes detailing various ad hoc committee and sub-committee actions.

### **Products:**

1. Monthly TAC and Executive Policy Board meetings and minutes.
2. Necessary 2023 and/or 2024 work activity revisions and financial amendments to the UPWP will be made.
3. Adoption of the 2025-2026 UPWP.

### **Completion Date(s):**

1. Ongoing activity
2. As needed.
3. October 31, 2024.

<b>Planning Factors</b>	Economic Vitality, Safety, Accessibility & Mobility, Environment & Community, Efficiency, Preservation, Resilience & Reliability		
<b>Planning Emphasis Areas</b>	Data, Public Outreach		
<b>2023 Task Effort</b>	<b>Total Cost</b>	<b>Staff Hours</b>	<b>Consultant Fee</b>
	\$22,458	325	\$0.00
<b>2024 Task Effort</b>	<b>Total Cost</b>	<b>Staff Hours</b>	<b>Consultant Fee</b>
	\$25,000.00	325	\$0.00

### **100.3 FINANCIAL MANAGEMENT**

#### **Objective:**

To provide the financial management and oversight of the MPO accounting system as required by the GF-EGF MPO Executive Policy Board and Federal and State regulations.

#### **Proposed Work:**

The GF-EGF MPO's Financial and human resources related items are done in-house by the GF-EGF MPO's Office Manager.

The charge for annual audits and the monthly financial reports, as well as the time necessary to prepare the various accounting functions (e.g., payroll, journal entries, general ledger entries, invoicing, payment of taxes, worker's compensation, unemployment, and pension benefits), are completed under this task.

The cost of purchasing bonding insurance for the members of the Executive Policy Board and staff will also be charged for this task.

#### **Products:**

1. Monthly financial statements, including monthly billings.
2. Year-end Financial Report – January 31, 2023, and January 31, 2024
3. FY2023 Annual Audit
4. FY2024 Annual Audit

#### **Completion Date(s):**

1. Monthly Financial Information – The end of the following month.
2. Year-end Financial Report – January 31, 2023, and January 31, 2024.
3. FY2022 Annual Audit – April 30, 2023.
4. FY2023 Annual Audit – April 30, 2024.

<b>Planning Factors</b>			
<b>Planning Emphasis Areas</b>	Data		
<b>2023 Task Effort</b>	<b>Total Cost</b>	<b>Staff Hours</b>	<b>Consultant Fee</b>
	\$29,476	500	\$0.00
<b>2024 Task Effort</b>	<b>Total Cost</b>	<b>Staff Hours</b>	<b>Consultant Fee</b>
	\$35,000.00	600	\$0.00

## **100.4 FACILITIES AND OVERHEAD**

### **Objective:**

To monitor and track non-salaried administrative items.

### **Proposed Work:**

Non-salaried costs for miscellaneous photocopying and office supplies are included in this task. Small equipment purchases, paper, postage, commercial printing, and advertising (to include public hearing notices) will be charged to this task when not appropriate to other elements in the work program.

Items covered also include fixed administrative cost for office rent in East Grand Forks City Hall. The rental agreement for office space is negotiated on a square-foot basis using reasonable market rates and includes the cost of heat, utilities, janitorial services, and furnishing. Grand Forks is currently studying its space within its City Hall, so during this time the GF-EGF MPO is still temporarily shifting its main staffing to the East Grand Forks City Hall Office.

### **Products:**

1. GF-EGF MPO Office Space East Grand Forks City Hall.
2. Non-salaried administrative costs of supplies.

### **Completion Date(s):**

1. Not Applicable.
2. Not Applicable.

<b>Planning Factors</b>			
<b>Planning Emphasis Areas</b>			
<b>2023 Task Effort</b>	<b>Total Cost</b>	<b>Staff Hours</b>	<b>Consultant Fee</b>
	\$30,000.00	0	\$0.00
<b>2024 Task Effort</b>	<b>Total Cost</b>	<b>Staff Hours</b>	<b>Consultant Fee</b>
	\$30,000.00	0	\$0.00



# **200.0 PROGRAM SUPPORT AND COORDINATION**

## **200.1 Interagency Coordination**

### **Objective:**

To increase communication among member units of government through participation and coordination in the Technical Advisory Committee, GF-EGF MPO, City Council, Planning Commission, and various other meetings.

### **Proposed Work:**

The Grand Forks-East Grand Forks Metropolitan Planning Organization (GF-EGF MPO) staff will continue to provide assistance to various committees involved in transportation planning. Currently, the GF-EGF MPO provides staff services to the MPO Executive Policy Board; the Technical Advisory Committee, the Greenway Trail Users Committee, City Councils, and City Planning and Zoning Commissions.

Special committees are normally formed to address specific studies. The time spent staffing and coordinating these special committees will be charged against those specific work elements whenever possible.

GF-EGF MPO staff also attend the Area Transportation Partnership (ATP) meetings in northwest Minnesota. Those meetings, like many of the county and city meetings, are held monthly. The time spent attending or participating in various non-project-specific meetings (non-educational) in either North Dakota or Minnesota will be charged for this task. This will include, but not be limited to, meetings with federal and state personnel on various matters, attending MPO Directors meetings in both Minnesota and North Dakota, staff, and TIP development meetings.

### **Products:**

1. Meetings, agendas, attendance, rosters, minutes, recommendations, press releases, and committee action on transportation issue.
2. Update Bylaws.

### **Completion Date(s):**

1. Ongoing activity.
2. MPO By-Law Update - December 31, 2024.

<b>Planning Factors</b>	Economic Vitality, Safety, Accessibility & Mobility, Environment & Community, Efficiency, Preservation, Resilience & Reliability		
<b>Planning Emphasis Areas</b>	Public Outreach, Equity, PELS		
<b>2023 Task Effort</b>	<b>Total Cost</b>	<b>Staff Hours</b>	<b>Consultant Fee</b>
	\$52,729	925	\$0.00
<b>2024 Task Effort</b>	<b>Total Cost</b>	<b>Staff Hours</b>	<b>Consultant Fee</b>
	\$60,000.00	950	\$0.00

## **200.2 Public Information And Citizen Participation**

### **Objective:**

To ensure broad-based citizen input into the transportation planning process undertaken by the GF-EGF MPO.

### **Proposed Work:**

In 1994, the GF-EGF MPO adopted a Public Participation Plan (PPP). This plan provides guidance and defines the process to ensure public participation in the transportation planning process.

The Plan was most recently updated in 2020 and will continue to be monitored and updated as appropriate, with the more effective techniques emphasized and ineffective ones discarded.

The PPP also incorporates the GF-EGF MPO's Title VI, Limited English Proficiency (LEP) ADA, and Environmental Justice documents.

Increased visualization techniques via the internet will be done. The GF-EGF MPO website was shifted to a new platform and is more user friendly. Video conferencing options for member participation, and general public, are continuing to be furthered as the concerns over health issues are in the forefront.

### **Products:**

1. Implement and maintain the Public Participation Plan.
2. Continue to assist the NDDOT and MnDOT by performing complementary public involvement assistance as requested.
3. Maintain the GF-EGF MPO Website.
4. Update the Public Participation Plan.

### **Completion Date(s):**

1. Implementation and maintenance of the Public Participation Plan is an ongoing activity.
2. Assisting the NDDOT and MnDOT is done as needed.
3. Maintaining the GF-EGF MPO Website is done as needed.
4. Updating the Public Participation Plan - December 31, 2024

<b>Planning Factors</b>	Economic Vitality, Safety, Accessibility & Mobility, Environment & Community, Efficiency, Preservation, Resilience & Reliability		
<b>Planning Emphasis Areas</b>	Equity, Public Outreach, PELS, Data		
<b>2023 Task Effort</b>	<b>Total Cost</b>	<b>Staff Hours</b>	<b>Consultant Fee</b>
	\$12,791	220	\$0.00
<b>2024 Task Effort</b>	<b>Total Cost</b>	<b>Staff Hours</b>	<b>Consultant Fee</b>
	\$30,000.00	410	\$0.00

## **200.3 EDUCATION/TRAINING AND TRAVEL**

### **Objective:**

To educate and maintain a staff with the skills and knowledge to carry-out the planning activities of the Grand Forks-East Grand Forks Metropolitan Planning Organization.

### **Proposed Work:**

Staff members will attend various workshops, short courses, and seminars that will enhance their knowledge and working skills. Training will be based on MPO programming needs and staff deficiencies.

Staff attendance at other meetings, either in North Dakota or Minnesota, shall be approved in advance by the Executive Director.

Staff time for attendance at any approved training or educational conference or seminar will be charged to this element. Per diem and mileage costs to attend meetings listed in this element, or in either the Public Information or Interagency Coordination elements, will be at the rate set by the Executive Policy Board, which is the GSA rate.

1. Minnesota MPO Workshop
2. North Dakota Transportation Conference
3. AMPO Conference
4. Western Planner Conference
5. APA National Planning Conference
6. Others to be identified

### **Products:**

- A better educated and trained staff that is more capable of performing their job duties.

### **Completion Date(s):**

1-6. Not Applicable.

<b>Planning Factors</b>	Economic Vitality, Safety, Accessibility & Mobility, Environment & Community, Efficiency, Preservation, Resilience & Reliability		
<b>Planning Emphasis Areas</b>	Equity, Public Outreach, PELS, Data		
<b>2023 Task Effort</b>	<b>Total Cost</b>	<b>Staff Hours</b>	<b>Consultant Fee</b>
	\$24,638	370	\$0.00
<b>2024 Task Effort</b>	<b>Total Cost</b>	<b>Staff Hours</b>	<b>Consultant Fee</b>
	\$30,000.00	420	\$0.00

## **200.4 EQUIPMENT**

### **Objective:**

To improve the MPO's ability to store, retrieve, and analyze transportation related data and to provide the necessary tools to operate an efficient office.

### **Proposed Work:**

Purchase, maintenance, and repair of computer equipment; purchase and maintenance of computer software; purchase of wall divider, furniture, and other required parts to remodel one office into two offices.

The anticipated equipment/software purchases for 2023-2024 may include, but are not limited to the following:

1. New computer for Senior Planner
2. Computer/software upgrades as required.

The GF/EGF MPO and the City of East Grand Forks intend to engage the services of an office design vendor to provide office design services and equipment. The overall objective of this project is to create two office spaces for staff by putting in a temporary wall and purchasing two workstations (desks/storage)

3. One removable wall divider and Two workstations (Desks/Storage)

### **Products:**

1. New computer(s)
2. Upgraded computers/software
3. Remodel one office into two with updated furniture/equipment

### **Completion Date(s):**

1. Purchasing and upgrading computers is an ongoing activity
2. Purchasing and upgrading software is an ongoing activity.
3. Office Remodel and purchase of office furniture and equipment will be completed by December 31, 2023

<b>Planning Factors</b>			
<b>Planning Emphasis Areas</b>			
<b>2023 Task Effort</b>	<b>Total Cost</b>	<b>Staff Hours</b>	<b>Consultant Fee</b>
	\$40,000.00	0	\$0.00
<b>2024 Task Effort</b>	<b>Total Cost</b>	<b>Staff Hours</b>	<b>Consultant Fee</b>
	\$20,000.00	0	\$0.00

**300.0 PLANNING  
AND  
IMPLEMENTATION**

## **300.1 METROPOLITAN TRANSPORTATION PLAN (MTP) UPDATE AND IMPLEMENTATION**

### **Objective:**

To complete updates of elements of the Metropolitan Transportation Plan (MTP).

### **Proposed Work:**

The GF-EGF MPOs Metropolitan Transportation Plan (MTP) is comprised of three separate element plans for specific modes of transportation: Transit, Bicycle and Pedestrian, and Street and Highway. These three elements are combined into an Executive Summary that constitutes the multimodal long range transportation plan for the metropolitan planning area.

The socio-economic data for all of the individual elements are the same; likewise, the individual element plans all share the same goals. Each element plan utilizes a similar format of objectives and standards that cover the same broad concepts but that are individualized for that mode.

The MTP update began in 2021 and continues through 2023, with an expiration date of January 2024. The work that remains is to gather the 2020 Census data, completing the inventory of the areas land uses and future land use plans, and converting data into current geospatial databases.

Included will be to identify the goal statements of the MTP. From these agreed goal statements during 2023 the various elements will be melded into one multimodal long range transportation plan out to the year 2050.

### **2023 ANNUAL WORK PROGRAM ACTIVITIES**

#### **1. 300.11 A.T.A.C**

The GF-EGF MPO pays \$10,000 annually for the North Dakota MPO Planning Support Program Master Agreement three-year contract with A.T.A.C. This agreement is renewed every three years, it will be renewed in October 2024.

#### **2. 300.12 BICYCLE AND PEDESTRIAN ELEMENT**

In 2022, the GF-EGF MPO retained a consultant to assist in the development of an updated Bicycle and Pedestrian Element. The consultant will continue to work with the GF-EGF MPO and local partners on analyzing the status of the bicycle and pedestrian network, the progress towards the adopted performance targets and the development of new or further refinement of the existing planned future network.

#### **3. 300.13 STREET AND HIGHWAY ELEMENT**

A consultant was retained during the second half of 2022 to complete the street and highway element of the MTP.

The work for 2022 focused on establishing the “base” conditions of the street and highway system and to develop the necessary performance report. The bulk of work to identify the “future” conditions will be done in 2023.

## **2024 ANNUAL WORK PROGRAM ACTIVITIES**

### **1. 300.11 A.T.A.C.**

The GF-EGF MPO pays \$10,000 annually for the North Dakota MPO Planning Support Program Master Agreement three-year contract with A.T.A.C. This agreement is renewed every three years, it will be renewed in October of 2024.

### **2. 300.12 Regional ITS Architecture Update**

An update to our Regional ITS Architecture is due for 2024. This document plans how our transportation partners install and maintain components to ensure interoperability among the various devices. The update will again utilize the Advanced Traffic Analysis Center (ATAC) and will ensure coordination with recent ITS Architecture updates by both states.

### **3. 300.13 Street and Highway Element**

The final Street and Highway Element update document will be completed, and approval will be sought in the first part of 2024.

#### **Products:**

1. Updated performance measures and targets.
2. Updated Bike/Pedestrian Plan Element of the 2050 MTP.
3. Updated Street/Highway Element of the 2050 MTP.
4. ITS Architecture Update.

#### **Completion Date(s):**

##### **2023**

1. 300.11 A.T.A.C. – On-going as required.
2. 300.12 Bicycle and Pedestrian Element – August 31, 2023
3. 300.13 Street and Highway Element - January 31, 2024

##### **2024**

1. 300.11 A.T.A.C. – On-going as required.
2. 300.12 ITS Architecture – December 31, 2024
4. 300.13 Street and Highway Element – January 31, 2024

<b>Planning Factors</b>	Economic Vitality, Safety, Security, Accessibility & Mobility, Environment & Community, System Connectivity & Integration, Efficiency, Preservation, Resilience & Reliability		
<b>Planning Emphasis Areas</b>	Climate, Equity, Complete Streets, Public Outreach STRAHNET, PELS, Data		
<b>2023 Task Effort</b>	<b>Total Cost</b>	<b>Staff Hours</b>	<b>Consultant Fee</b>
	\$403,455	1175	\$320,000.00
<b>2024 Task Effort</b>	<b>Total Cost</b>	<b>Staff Hours</b>	<b>Consultant Fee</b>
	\$284,000.00	1025	\$120,000.00



## **300.2 CORRIDOR PLANNING**

### **Objective:**

To continue to develop a program utilizing video detecting cameras to systematically count traffic and to evaluate, on a monthly basis, conformance of proposed development with existing metropolitan plans and roadway design standards and policies.

### **Proposed Work:**

#### **1. 300.21: A.T.A.C. Traffic Counting Program**

ATAC will be asked to assist us in continuing development of a traffic program based upon the video detection used for traffic signal operations for 2023/2024.

#### **2. 300.22: Corridor Preservation**

This ongoing process will evaluate zoning amendments, proposed subdivision plats, planned unit developments (PUDs), and site plans for consistency with the traffic engineering and highway policies of the plan. The review process is designed to preserve and enhance our transportation corridors. The review process ensures that rights-of-way are considered with the recommendations in the Street and Highway Plan, Bicycle and Pedestrian Plan, and the Transit Development Plan.

### **Products:**

1. 300.21: A.T.A.C. Traffic Counting Program – 2023/2024.
2. 300.22: Corridor Preservation – a location map of the monthly plan review.

### **Completion Date(s):**

1. 300.21: A.T.A.C. Traffic Counting Program – 2023/2024 - Ongoing activity.
2. 300.22: Corridor Preservation - Ongoing activity.

<b>Planning Factors</b>	Economic Vitality, Safety, Security, Accessibility & Mobility, Environment & Community, System Connectivity & Integration, Efficiency, Preservation, Resilience & Reliability		
<b>Planning Emphasis Areas</b>	Climate, Equity, Complete Streets, Public Outreach STRAHNET, PELS, Data		
<b>2023 Task Effort</b>	<b>Total Cost</b>	<b>Staff Hours</b>	<b>Consultant Fee</b>
	\$52,854	355	\$30,000.00
<b>2024 Task Effort</b>	<b>Total Cost</b>	<b>Staff Hours</b>	<b>Consultant Fee</b>
	\$75,000.00	790	\$30,000.00

### **300.3 TIP AND MANUAL UPDATE**

#### **Objective:**

To prepare a multi-year multimodal Transportation Improvement Plan (TIP) for the metropolitan area that is consistent with federal requirements.

#### **Proposed Work:**

Preparation of the TIP for 2024-2027 and 2025-2028, to include a self-certification review and statement, as well as any amendments to the 2023-2026 TIP will be done during this Unified Planning Work Program (UPWP).

The TIPs will be developed in accordance with the GF-EGF MPO's Public Participation Plan.

The GF-EGF MPO will meet with the State DOTs and local transit operators prior to project selection. The GF-EGF MPO will assist the Northwest Area Transportation Partnership (NWATP) with the development of the NWATP Area Transportation Improvement Program (ATIP).

The GF-EGF MPO will cooperate with the States to develop State TIP (STIP). The TIP policies and procedures for the GF-EGF MPO Planning Area will be reviewed and updated.

#### **Products:**

1. 2023-2026 TIP Amendments.
2. 2024-2027 TIP
3. 2025-2028 TIP
4. TIP Manual Update

#### **Completion Date(s):**

- 1-4. As required by Minnesota and North Dakota Departments of Transportation.

<b>Planning Factors</b>	Economic Vitality, Safety, Security, Accessibility & Mobility, Environment & Community, System Connectivity & Integration, Efficiency, Preservation, Resilience & Reliability		
<b>Planning Emphasis Areas</b>	Climate, Equity, Complete Streets, Public Outreach STRAHNET, PELS, Data		
<b>2023 Task Effort</b>	<b>Total Cost</b>	<b>Staff Hours</b>	<b>Consultant Fee</b>
	\$35,944	630	\$0.00
<b>2024 Task Effort</b>	<b>Total Cost</b>	<b>Staff Hours</b>	<b>Consultant Fee</b>
	\$35,000.00	600	\$0.00

### **300.4 LAND USE PLAN**

**Objective:**

To assist each city in their efforts to continue the connection between transportation and land use.

**Proposed Work:**

How, where, and what types of activities are located has a profound impact on the needed transportation facilities to serve that area. The GF-EGF MPO and the cities of Grand Forks and East Grand Forks have a long-standing history of coordination.

The GF-EGF MPO has assisted each City to update their Land Use Plans in order to ensure the Transportation Plan is reflecting future traffic forecasts based upon future land activities.

**Products:**

1. Updated Land Use Plans for Grand Forks and East Grand Forks.

**Completion Date(s):**

1. On-going activity.

<b>Planning Factors</b>	Economic Vitality, Safety, Security, Accessibility & Mobility, Environment & Community, System Connectivity & Integration, Efficiency, Preservation, Resilience & Reliability		
<b>Planning Emphasis Areas</b>	Climate, Equity, Complete Streets, Public Outreach STRAHNET, PELS, Data		
<b>2023 Task Effort</b>	<b>Total Cost</b>	<b>Staff Hours</b>	<b>Consultant Fee</b>
	\$0	0	\$0.00
<b>2024 Task Effort</b>	<b>Total Cost</b>	<b>Staff Hours</b>	<b>Consultant Fee</b>
	\$20,000.00	150	\$10,000.00

## **300.5 SPECIAL STUDIES**

### **Objective:**

#### **1. 300.51: Future Bridge**

A future Bridge Impact Study was started in 2020 and will be carried over into 2021. After completion of the study there have been a series of discussions on what is next that has caused educational discussions to continue into 2022. It appears that these conversations will continue for the next few years as possibilities of taking the next steps on an inner-city Bridge and/or a bridge at Merrifield continue to be considered.

#### **2. 300.52: Policy and Procedure Updates**

The GF-EGF MPO has a few Policy and Procedures and Manuals that need to be updated.

#### **3. 300.53: Safe Streets For All (SS4A)**

A joint application for a Safe Streets for All Safety Action Plan was submitted by the City of Grand Forks, City of East Grand Forks, and the GF-EGF MPO with numerous letters of support from the community. We have been notified the grant has been awarded to conduct a Safety Action Plan for the MPO area.

#### **4. 300.54: Micro Transit Study**

It was determined coming out of the Transit Development Plan (TDP) that Micro Transit should be further studied.

### **Completion Date(s):**

1. 300.51: Future Bridge Discussion - Ongoing activity.
2. 300.52: Policy and Procedure Updates - Ongoing activity.
3. 300.53: Safe Streets For All (SS4A) - To be determined.
4. 300.54: Micro Transit Study - December 31, 2024

<b>Planning Factors</b>	Economic Vitality, Safety, Security, Accessibility & Mobility, Environment & Community, System Connectivity & Integration, Efficiency, Preservation, Resilience & Reliability		
<b>Planning Emphasis Areas</b>	Climate, Equity, Complete Streets, Public Outreach STRAHNET, PELS, Data		
<b>2023 Task Effort</b>	<b>Total Cost</b>	<b>Staff Hours</b>	<b>Consultant Fee</b>
	\$269,856	1065	\$202,318
<b>2024 Task Effort</b>	<b>Total Cost</b>	<b>Staff Hours</b>	<b>Consultant Fee</b>
	\$215,000.00	800	\$125,000.00

## **300.6 PLAN MONITORING, REVIEW AND EVALUATION**

### **Objective:**

To provide up-to-date information for use in updating and preparing transportation plans and studies, and to prepare an Annual Monitoring and Surveillance Report. In addition, transportation-related data is to be provided, as requested, to decision-makers and the public relating to housing, demographics, traffic volumes, turning movements, etc.

### **Proposed Work:**

#### **1. 300.61: Annual Performance Report 2023/2024**

To prepare an annual Performance Report which documents data collection activities and provides analyses of the trends relative to the projections and assumptions outlined in the Transportation Plan. In addition, socio-economic and land use conditions and trends will be evaluated.

#### **2. 300.62: Data Collection**

Continue to collect data as needed to carry out the 3-C Planning Process including information for decision makers, the public, and program and special studies. The GF-EGF MPO will acquire a software licensing subscription with Urban SDK. The datasets include automated performance measures for past, current, and future trends within the community.

### **Products:**

1. Annual Performance Report.
2. Data compilations as needed for planning purposes.

### **Completion Date(s):**

1. 300.61: Annual Performance Report 2023/2024 - December 31, 2023/2024.
2. 300.62: Data Collection - Ongoing activity.

<b>Planning Factors</b>	Safety, Accessibility & Mobility, Environment & Community, Preservation, Resilience & Reliability		
<b>Planning Emphasis Areas</b>	Climate, Equity, PELS, Data		
<b>2023 Task Effort</b>	<b>Total Cost</b>	<b>Staff Hours</b>	<b>Consultant Fee</b>
	\$61,778	415	\$38,000
<b>2024 Task Effort</b>	<b>Total Cost</b>	<b>Staff Hours</b>	<b>Consultant Fee</b>
	\$50,000.00	990	\$0.00

## **300.7 GIS DEVELOPMENT AND APPLICATION**

### **Objective:**

To maintain and expand the Geographic Information System (GIS) for the GF-EGF MPO study area, which includes the Cities of Grand Forks and East Grand Forks, and approximately two miles of adjacent territory.

### **Proposed Work:**

Maintenance of the existing GIS resources is a priority. The inventory of GIS resources will be maintained in order of relevance and priority. When possible, GIS resources will be integrated with others to provide a user-friendly interface and to simplify maintenance responsibilities. The GF-EGF MPO will take new aerial photos of the GF-EGF MPO study area in 2024.

The GF-EGF MPO has been programming these new aerial photos on a cycle of every three years. The last area-wide photo was taken in 2021.

### **Products:**

1. An integrated GIS, complete with software, digital maps, attribute tables, which is readily available to staff. More specifically, this will include property level GIS analysis for the entire GF-EGF MPO study area, with the internal staff training available to maximize use.
2. Area-wide aerial photos.
3. Additional transportation and land use planning applications that will provide staff with tools necessary to provide information to their respective entity and the public.

### **Completion Date(s):**

1. Integrated GIS – Ongoing activity
2. Area-wide aerial photos - August 31, 2024
3. Additional transportation and land use planning applications – Ongoing activity

<b>Planning Factors</b>	Safety, Security, Accessibility & Mobility, Environment & Community, System Connectivity & Integration		
<b>Planning Emphasis Areas</b>	Climate, Equity, Public Outreach, PELS, Data		
<b>2023 Task Effort</b>	<b>Total Cost</b>	<b>Staff Hours</b>	<b>Consultant Fee</b>
	\$20,150	390	\$0.00
<b>2024 Task Effort</b>	<b>Total Cost</b>	<b>Staff Hours</b>	<b>Consultant Fee</b>
	\$50,000.00	520	\$0.00

## MPO Unified Planning Work Program 2023-2024

Task	Update	% Completed	Local Adoption	State/ Federal Approval
<b>Bike &amp; Pedestrian Plan Update</b>	Preliminary approvals in June and final approvals in July	98%	June/July 2023	August 2023
<b>Street &amp; Highway Plan / MTP</b>	We have the base model completed, and bringing updates and seeking input from leadership and public.	68%	Oct./Nov. 2023	Dec-23
<b>Aerial Imagery</b>	The data has passed initial QC and we are moving into Aerotriangulation. We are on track to deliver by or before the 8/3 due date.	55%	Oct. 2023	Oct. 2023
<b>ATAC - Planning Support Program</b>	On-going			
<b>TIP Adoptions and Amendments</b>	On-going			
<b>ITS Architecture</b>	2024 Project			
<b>ATAC - Traffic Counting Program</b>	On-going			
<b>Land Use Plan</b>	On-going/As needed			
<b>Future Bridge Discussions/Assistance</b>	On-going/As needed			
<b>Updating Policy and Procedures/By-Laws</b>	2023/2024 Project			
<b>Micro Transit Study</b>	2024 Project			
<b>Grand Valley Study</b>	2023 Project			
<b>Safe Streets For All (SS4A) Grant</b>	Working on the contract with our federal partners and local partners		TBD	TBD

**Table 7-1: 2023 Annual Listing of Obligated Projects**

MPO ID	State Project Number	Lead Agency	Project Year	Project Location	Termini		Description	Type of Work	Federal Program Source	Total Cost	Federal	State/Local	Project Status (as of July 2023)
					From	To							
<b>Grand Forks Transit</b>													
119001		CAT- Grand Forks	2023	City of Grand Forks			Operating for Grand Forks transit service. Service will operate 6 days a week and averages 62.5 hours of revenue service daily.	Transit Operation	FTA 5307	\$3,583,590	\$1,253,820	\$2,329,770	Funds Obligated
119002		CAT- Grand Forks	2023	City of Grand Forks			Capital Purchase/Replacement of safety and/or security hardware and software.	Transit Capital	FTA 5307	\$16,400	\$13,120	\$3,280	Funds Obligated
117001		CAT- Grand Forks	2023	City of Grand Forks			Expansion of the Public Transportation Maintenance Building and New Fuel System.	Transit Capital	FTA 5339	\$8,631,936	\$7,768,742	\$863,194	Bid awarded
<b>East Grand Forks Transit</b>													
219001	TRF-0018-23B	East Grand Forks	2023	East Grand Forks			Operation for East Grand Forks fix-route transit service. Service operates 6 days a week and averages 36 hours of revenue service daily.	Transit Operations	FTA 5307	\$617,400	\$199,300	\$408,100	Funds Obligated
219002	TRF-0018-23A	East Grand Forks	2023	East Grand Forks			Operation for demand response service for disabled persons and senior citizens. The paratransit service operates the same hours as the fixed-route service.	Paratransit Operations		\$147,400	\$0	\$147,400	Funds Obligated
223044		East Grand Forks	2023	East Grand Forks			Tool Cat suport equipment (quantity 2)	Transit Capital	ARP	\$161,045	\$150,955	\$10,090	Funds Obligated
<b>NDDOT</b>													
119004	22167	NDDOT	2023	N Washington St			Roadway reconstruction and structure rehabilitation.	Rehabilitation	NHU	\$12,175,526	\$9,740,420	\$2,435,106	Out For bid in October/ Moved to 2024
122001	23015	NDDOT	2023	Varies			Deck overlay and other repairs on various bridges on US-2, US-81, and I-29.	Rehabilitation	Bridge	\$3,426,000	\$2,740,800	\$685,200	
122011	23797	NDDOT	2023	Various			Var HWYS- Grand Forks District Pavement Mark	Safety	HEN	\$1,500,000	\$1,350,000	\$150,000	
121003	23349	NDDOT	2023	32nd Ave S	I-29	S Washington St	Pavement preservation to be CPR, grinding, and microseal.	Rehabilitation	SecR	\$3,356,000	\$2,684,800	\$671,200	Out for bid in May/Split and half moved to 2024
123030	24003	NDDOT	2023	University Ave DOT-AAR#081287Y			Surface rehabilitation and lift crossing.	Rehabilitation	FRF	\$141,035	\$141,035	\$0	



**Table 7-1: 2023 Annual Listing of Obligated Projects**

MPO ID	State Project Number	Lead Agency	Project Year	Project Location	Termini		Description	Type of Work	Federal Program Source	Total Cost	Federal	State/Local	Project Status (as of July 2023)
					From	To							
<b>City of Grand Forks</b>													
119003	23232	City of Grand Forks	2023	Varies			Urban Roads system citywide signal rehab	ITS Rehab	UGP	\$4,186,220	\$3,110,000	\$1,076,220	
118001		City of Grand Forks	2023	N/S 42nd St	DeMers Ave		Preliminary Engineering for 42nd St & DeMers Railroad Overpass	Preliminary Engineering		\$6,400,000	\$5,120,000	\$1,280,000	
<b>MnDOT</b>													
221001	60-00137	MnDOT	2023	2nd Ave NE			BNSF RR Replace Existing Signal System at MSAS 119, 2nd Ave, East Grand Forks, Polk County	RR Xing		\$300,000	\$270,000	\$30,000	MnDot & BNSF are preparing the preemption timing. The goal is to have funds encumbered (agreement executed) prior to June 30, 2023. Construction schedule will be up to BNSF.
<b>City of East Grand Forks</b>													
223045		East Grand Forks	2023	5th Ave NE	15th St NE	20th St NE	Urban reconditioning project consisting of misc. concrete street panel & curb and gutter replacement and minor ADA improvements	Rehabilitation	City Sub Target	\$553,075	\$382,403	\$170,672	
223046		East Grand Forks	2023	5th Ave NE	US-2	20th St NE	Urban reconditioning project consisting of misc. street panel & curb and gutter replacement	Rehabilitation	City Sub Target	\$271,398	\$187,647	\$83,751	
223047		East Grand Forks	2023	DeMers Ave			Replacement of bituminous pavement in area of old railroad tracks and installing concrete pavement & curb and gutter. Also includes, misc. concrete panel & curb and gutter replacement, along with ADA	Rehabilitation	City Sub Target	\$419,359	\$289,950	\$129,409	
223038	119-080-012	East Grand Forks	2023	Varies			**CRP** CITY OF EAST GRAND FORKS: PURCHASE AND INSTALLATION OF 11 PREEMTION EMITTERS ON FIRE TRUCKS	Environmental	CRP	\$6,225	\$4,980	\$1,245	
<b>Totals</b>										<b>\$45,892,609</b>	<b>\$35,407,972</b>	<b>\$10,474,637</b>	