# MEETING OF THE FUNDING & PROGRAMMING COMMITTEE

Thursday July 22, 2021
Remote Meeting Via Webex# | 1:30 PM
# Contact Joe Barbeau (*joseph.barbeau@metc.state.mn.us*) for access to the video conference.

## AGENDA

### I. CALL TO ORDER

### II. APPROVAL OF AGENDA

### III. APPROVAL OF MINUTES

June 17, 2021, meeting of the Funding & Programming Committee

### IV. TAB REPORT

### V. BUSINESS

None

### VI. INFORMATION

1. Regional Solicitation: Measures
2. Regional Solicitation: Outlier Adjustments
3. Regional Solicitation: Unique Projects Update
4. Highway Safety Improvement Program (HSIP) Application

### VII. OTHER BUSINESS

### IX. ADJOURNMENT



METROPOLITAN COUNCIL

# Minutes of the REGULAR MEETING OF THE TAC FUNDING & PROGRAMING COMMITTEE

Thursday, June 17, 2021

**Committee Members Present:** Michael Thompson (Chair, Plymouth), Jerry Auge (Anoka County), Angie Stenson (Carver County), Jenna Fabish (Dakota County), Jason Pieper (Hennepin County), Craig Jenson (Scott County), Joe Ayers-Johnson (Washington County), Elaine Koutsoukos (TAB), Cole Hiniker (Metropolitan Council), Anna Flintoft (Metro Transit), Molly McCartney (MnDOT Metro District), Colleen Brown (MnDOT Metro District State Aid), Innocent Eyoh (MPCA), Mackenzie Turner Bargen (MnDOT Bike & Ped), Nancy Spooner-Mueller (DNR), Ben Picone (MVTA), Ken Ashfeld (Maple Grove), Karl Keel (Bloomington),Paul Oehme (Lakeville), Robert Ellis (Eden Prairie), Jim Kosluchar (Fridley), Ethan Fawley (Minneapolis), Ann Weber (St. Paul)

**Committee Members Absent:** John Mazzitello (Ramsey County)

## I. CALL TO ORDER

A quorum being present, chair Thompson called the regular meeting of the Funding & Programming Committee to order at 1:31 p.m. on Thursday, June 17, 2021. Due to the COVID-19 pandemic, the meeting was held via teleconference.

## II. APPROVAL OF AGENDA

The agenda was approved without a vote. A vote is only needed if changes are made to the agenda.

## III. APPROVAL OF MINUTES

MOTION: It was moved by Spooner-Mueller and seconded by Pieper to approve the minutes of the May 21, 2021, regular meeting of the Funding & Programming Committee. The motion was approved unanimously via roll call.

## IV. TAB REPORT

Koutsoukos reported on the June 16, 2021, TAB meeting.

## V. BUSINESS

None.

## VI. INFORMATION

1. Regional Solicitation: Measure Changes

   Barbeau said that while roadway measure changes may be discussed in July, there are two measures to discuss at this meeting: risk assessment and affordable housing.

   Within risk assessment, the layout sub-measure provided confusion in terms of what a layout is. Brown, who scores most of the risk assessment, said that a definition of what a layout is, and is not, is needed. Some applicants show an arial photo with a line drawn over it. Further, some applications, like for signalization projects, may not need a layout at all. Stenson asked what is meant by “MnDOT approval,” sharing an example of a layout that had had a lot of MnDOT input, but had not received approval through the MnDOT layout committee. Brown replied that a letter could perhaps be provided by MnDOT stating their approval. Barbeau asked whether that opens up to more ambiguity. McCartney said that letters from impacted communities are needed early. Thompson suggested that more point tiering can be used.

The right-of-way sub-measure of risk assessment caused some confusion in that some applicants do not understand that any acquisition is a right-of-way acquisition. Brown said that the wording is clear, though limited use permits are a risk. Barbeau said that this can be added to the language. Ashfeld said that once a project is fully funded, a municipality has the right to complete a 90-day quick-take, to which Thompson replied that there is less risk for a project that does not need to purchase right-of-way. Brown added that partial points are received if the acquisition process is underway. Keel asked whether right-of-way still leads to projects not being completed, to which Brown replied in the affirmative.

The public involvement piece of the risk assessment, not scored by Brown, created confusion in that there were several tallies for applicants to fill out along with check boxes and an open-ended response. One question is whether the goal is to provide the opportunity for public input or receipt of quality input. Members suggested that within the risk assessment, the objective is to provide the opportunity for input. Kosluchar asked whether the Council can provide best practices. Keel said that there should be tiering, showing things like outreach to neighborhoods and inclusion of decisionmakers along the way. Kosluchar said that the focus on meetings might neglect other means of reaching out to residents. Eyoh said that larger MnDOT projects such as Rethinking I-94 document their processes with a lot of details, particularly in areas where there are high concentrations of environmental justice areas. Lacking outreach to environmental justice areas could lead to a risk of a lawsuit occurring. In response to Eyoh and Kosluchar, Thompson suggested that using “meetings” could be archaic and other outreach methods should be rewarded. Members generally suggested that the dates and number of meetings should be removed in favor of the tiered checkboxes. Thompson suggested that the written responses should remain. Ayers-Johnson suggested that applicants of non-construction applications should have to fill out the public involvement part of the risk assessment. Barbeau asked if the written responses remain whether the scorers should have some discretion within a point range, to which Thompson suggested that the checkboxes should be used.

Barbeau said that for the last four cycles, housing scoring has been based on the housing performance score (HPS) and is meant to incentivize better affordable housing processes. Following sentiment for housing to be judged on more project-specific traits, a 10-point breakout trying to do that was created. This included finding existing and future affordable housing, which proved difficult for applicants. Koutsoukos said that it was particularly difficult for transit applicants because the length of the projects led to having a lot of properties to find. She added that while existing properties were easy to find, planned developments were difficult. Pieper said that Hennepin County figured out how to get the information but it was time-consuming, particularly given that it was only worth 10 points. Ayers-Johnson said that it was time consuming, particularly for a project that ran along the border of two counties. He added that the text limit was too small. He suggested that either the HPS be used or a more easily accessible database be used. Turner Bargen asked whether something more easily accessible could be more easily measured, such as something from the Accessibility Observatory at the University of Minnesota. Koutsoukos said that the HPS is a citywide score, while TAB was interested in funds going to where affordable housing is being developed. Stenson said she would prefer to explain a direct benefit to affordable housing.

2. Regional Solicitation: Outlier Adjustments

Barbeau said that in 2016, scorers found a lot of “outlier” situations in proportionate scores, in which one application would dominate the scoring and the other applications would see limited point distribution. Starting in 2018, scoring committees were able to adjust for these outliers. However, there is no definition for what an outlier is, prescription for when to adjust for an outlier, or standard for how to adjust for an outlier. Traditionally committees “know one when

they see it" and tend to adjust by proportionately rating each application to the second-ranked application. Barbeau added that the adjustments, while improving the spread of the scores within a measure, reduce the advantage of the top-performing application.

Chair Thompson said that there should be trust in the judgement of the scoring committees, though a way to maintain an advantage for the top-scoring application should be found.

Reading from the chat, Barbeau shared Picone's question of whether adjusting for an outlier assumes that the outlier is going to be funded and stated that this is not the case; a lost advantage in one measure can impact a final score. Ayers-Johnson shared that he liked the example shown in the materials that adjusts the top-rated application above 100% in order to maintain its advantage. Stenson agreed that that there should be a benefit to rating as the best application in a measure, adding that she would advocate for direction being provided to the scoring committees. Hiniker said that he does not prefer to be prescriptive on when an outlier is used but does like guidance on how to adjust, for example adjusting the second-ranked application to 50%. Chair Thompson suggested that a range, such as 50% to 75% could be provided.

Koutsoukos pointed out that in the second example shared in the handout, the scores were increased, but the margins between applications were only adjusted negligibly. Therefore, the biggest impact was the reduced benefit on the top-performing application.

Thompson suggested that an outlier adjustment should be a "last resort."

Flintoft suggested that an adjustment is more important in heavily weighted measures.

Kosluchar suggested the use of log scores, which would provide more transparency.

Stenson suggested definitive guidance that would be defined ahead of time to create consistency. For example, if the top-scoring application was over double the score of all others, move the second-rated application to 50% and adjust others to that.

3. Regional Solicitation: Geographic Balance

Barbeau said that over many Regional Solicitation cycles, TAB and its technical committees have struggled with the concept of geographic balance. In the 2020 funding cycle, overprogramming funds were used to address geographic balance by assuring that at least one project within each county was funded. "Geographic balance" has never been defined and seems to mean different things to different participants. He said that the focus has primarily been on county population versus federal dollars allocated in the region. There may be other geographies to measure and statistics beyond simple population to weigh against federal funding. Other questions include looking at individual Regional Solicitation cycles versus considering distribution over time; whether HSIP applications are part of the discussion; and, assuming each county should be awarded in each cycle, is one small project adequate? In 2020, TAB weighed Roadway Strategic Capacity heavily in order to fund an application from each county.

Keel suggested that Streetlight data or other technology could be used to see who benefits from projects. He added that funding is well-distributed over time. Kosluchar said that while scores could in theory be geographically unbalanced, spread comes out evenly because there is need everywhere. He added that the county data is used because the TAB process is very county driven.

Hiniker said that balance should be examined over time as opposed to one cycle at a time.

Ayers-Johnson said that this is a policy decision that should not be codified. He added that the spread appears to be balanced over time and that HSIP should not be included in the discussion.

4. Regional Solicitation: Funding Guarantees

   Barbeau said that there are “guaranteed” project types to be funded. This includes funding at least one project in each eligible roadway classification, the $25M arterial bus rapid transit (ABRT) project, which includes a $32M maximum for bus rapid transit and ABRT and funding at least one project in Transit Market Area III, IV, or V.

5. Regional Solicitation: Criteria Measures and Weights

   Barbeau said that criteria weights were established by TAB in 2014 and some changes have occurred. Each criterion is scored by one to four scoring measures, which are informed by technical input.

   Fawley suggested examining the balance in congestion versus safety in the Spot Mobility and Safety category, where each is weighted the same. He said that the Roadway Reconstruction/Modification category favors safety, while Strategic Capacity weighs them the same and suggested targeting a split in between the two.

   Ayers-Johnson asked whether the weighting of equity is likely to change, to which Chair Thompson said that change is unlikely.

   Pieper suggested comparing the weights to the purpose statements. He said that the Roadway Reconstruction/Modernization statement, “to fund arterial preservation projects that improve infrastructure condition, safety, and multimodal travel options” indicates that there are four or five measures that could be directly connected to projects. He said that multimodal travel options is not weighted as highly as safety and usage, which could be examined in light of the statement.

   Stenson said that some Spot Mobility and Safety applications scored well in safety and congestion but were not funded. Thompson asked whether an example of an improvement would be to change Role in the Region to 10% and bump safety and congestion each to 28%, which which Stenson replied in the affirmative. Chair Thompson said that the direction to staff is increasing safety and congestion in the Spot Mobility and Safety category to have some parity with the others. Barbeau said that while Regional Solicitation weightings tend not to change a lot, 2020 was the first time this category was used, so it may be appropriate to look at this category harder.

6. Regional Solicitation: Purpose Statements

   Barbeau said that in response to applicants expressing confusion about the goals that the funding categories are trying to achieve, staff created a draft “purpose statement” for each. Technical committee members had expressed interest in providing feedback into these statements, which will be included in the final Regional Solicitation materials. Thompson encouraged members to share feedback with staff.

   Barbeau read two suggestions provided by TAC member Bill Dermody from St. Paul. First, Dermody suggested rephrasing the Traffic Management Technologies statement “to fund traffic

technology projects that improve travel time reliability and predictability, and reduce emissions." Second, he suggested that "…that improve reliable, predictable access to destinations" be added to the end of the Strategic Capacity statement.

Flintoft suggested that the ABRT statement change the prohibition of Capital Investment Grants to New Starts so that the later is not precluded.

## VII. OTHER BUSINESS

None.

## VIII. ADJOURNMENT

Chair Thompson adjourned the meeting.

Joe Barbeau
Recording Secretary

# INFORMATION ITEM

| | |
|---|---|
| **DATE:** | July 16, 2021 |
| **TO:** | TAC Funding and Programming Committee |
| **PREPARED BY:** | Joe Barbeau, Senior Planner (651-602-1705)<br>Steve Peterson, Manager of Highway Planning and TAC/TAB Process (651-602-1819)<br>Elaine Koutsoukos, TAB Coordinator (651-602-1717) |
| **SUBJECT:** | 2022 Regional Solicitation: Potential Roadway Measure Changes |

Through the surveys and meeting discussions, partners and applicants had comments on specific scoring measures, particularly new measures. Last month focused on a series of potential measure changes such as those under Risk Assessment. This month staff will recap discussions at various committee levels and then concentrate on any potential changes to the four roadway applications.

## 1. Pedestrian Safety Measure in Roadway Applications (Strategic Capacity, Modernization, and Spot Mobility and Safety)

In the previous solicitation, three of the Roadway categories (Strategic Capacity, Modernization, and Spot Mobility and Safety) had the following pedestrian safety measure:

> *"Discuss how the project will improve safety for pedestrians. Safety countermeasures for pedestrians can include those identified by the FHWA as part of its Safe Transportation for Every Pedestrian program or others in its Proven Safety Countermeasures (e.g., pedestrian refuge islands, raised crosswalks, pedestrian hybrid beacons, leading pedestrian intervals). More information about pedestrian safety best practices is also available in MnDOT's Best Practices for Pedestrian/Bicycle Safety.*
>
> *SCORING GUIDANCE (30 Points)*
>
> *The project that will provide the most improvement to pedestrian safety will receive full points. Remaining projects will receive a share of the full points at the scorer's discretion."*

The following proposal would replace this existing measure in these three application categories. The first part identifies projects that are largely not intended to benefit pedestrians and assigns a score of zero for the overall worksheet without applicants having to complete the remainder. There are then three sub-measures. The first is centered on how the project's design will impact pedestrian safety, including specific pedestrian safety countermeasures as well as any added risks and mitigation that is introduced from the project's design. The other two sub-measures evaluate existing safety risk and exposure factors, based on trends and patterns identified in crash data analysis done as part of the Regional Pedestrian Safety Action Plan.

The included scoring guidance assumes that overall pedestrian safety measure weighting will remain unchanged from the previous application cycle.

## *Determine if these measures do not apply to your project.*

Does the project match either of the following descriptions?

- ☐ Project is primarily a freeway (or transitioning to a freeway) **and** does not provide safe and comfortable pedestrian facilities and crossings.
- ☐ Existing location lacks any pedestrian facilities (e.g., sidewalks, marked crossings, wide shoulders in rural contexts) **and** project does not add pedestrian elements (e.g., reconstruction of a roadway without sidewalks, that doesn't also add pedestrian crossings and sidewalk or sidepath on one or both sides).

If either of the items above are checked, then **score for entire pedestrian safety measure is zero**. Applicant does not need to respond to the sub-measures and can proceed to the next section.

## *SUB-MEASURE 1: Project-Based Pedestrian Safety Enhancements and Risk Elements*

To receive maximum points in this category, pedestrian safety countermeasures selected for implementation in projects should be, to the greatest extent feasible, consistent with the countermeasure recommendations in the Regional Pedestrian Safety Action Plan and state and national best practices. The following is a current list of state-of-practice resources for pedestrian safety:

- *FHWA Safe Transportation for Every Pedestrian (STEP) Tools for Selecting and Implementing Countermeasures for Improving Pedestrian Crossing Safety*
- *FHWA STEP Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations*
- *NCHRP Report 926: Guidance to Improve Pedestrian and Bicyclist Safety at Intersections*
- National Association of City Transportation Officials Guides:
  - *City Limits: Setting Safe Speed Limits*
  - *Urban Street Design Guide*
  - *Urban Bikeway Design Guide*
  - *Designing for All Ages & Abilities*
  - *Don't Give Up at the Intersection*
  - *Transit Street Design Guide*
- *Manual on Uniform Traffic Control Devices (MUTCD)*
- *PEDSAFE*
- *BIKESAFE*
- *FHWA Proven Safety Countermeasures*
- CMF Clearinghouse

Please answer the following four questions with as much detail as possible based on the known attributes of the proposed design. If any aspect referenced in this section is not yet determined, describe the range of options being considered, to the greatest extent available. If there are project elements that may increase pedestrian risk, describe how these risks are being mitigated.

- **Describe how this project will address the safety needs of people walking/rolling along the street.**
    - Include mention of whether your project includes sidewalk or sidepath only on one side, or on both sides. Include any relevant context such as right of way constraints, location of pedestrian destinations, etc.

- **Describe how this project will address the safety needs of people crossing the street at signalized intersections, unsignalized intersections, and roundabouts.**
    - Refer to *NCHRP Report 926: Guidance to Improve Pedestrian and Bicyclist Safety at Intersections* for guidance on crossing facilities at intersections and roundabouts. The appendix contains a matrix of useful safety countermeasures to consider. For uncontrolled intersections and roundabouts, some of the treatments in *FHWA STEP Guide to Improving Pedestrian Safety at Uncontrolled Crossing Locations* may also be useful.
    - In your response, include mention of whether the distance between signalized intersections is increasing (e.g., removing a signal). If so, describe what measures are being used to fill the gap between protected crossing opportunities for pedestrians (e.g., adding High-Intensity Activated Crosswalk beacons to help motorists yield and help pedestrians find a suitable gap for crossing, turning signal into a roundabout to slow motorist speed, etc.).
    - Note whether your design will increase the crossing distance or crossing time across any intersection (e.g., by adding turn or through lanes, widening lanes, using a multi-phase crossing, prohibiting crossing on any leg of an intersection, pedestrian bridge requiring length detour, etc.).
        - If yes, note how many intersections will likely be affected.
        - If this is the case, describe what measures are being used to reduce exposure and delay for pedestrians (e.g., median crossing islands, curb bulb-outs, etc.).
        - If the crossing distance is increasing because bike lanes or buffered bike lanes are being added, note whether the project is considering reducing any other elements to mitigate the impact (e.g., reducing the number of motor vehicle lanes, removing a turn lane, reducing motor vehicle lane width).
        - In the case of grade separated pedestrian crossings, describe any features that are included that will reduce the detour required of pedestrians and make the separated crossing a more appealing option (e.g., shallow tunnel that doesn't require much elevation change instead of pedestrian bridge with numerous switchbacks).
    - Treatments and countermeasures should be well-matched to the roadway's context (e.g., appropriate for the speed, volume, crossing distance, and other location attributes).

- **Describe how this project will address the safety needs of people crossing the street at mid-block locations.**
    - Refer to *FHWA STEP Guide to Improving Pedestrian Safety at Uncontrolled Crossing Locations* for guidance on the types of countermeasures that are appropriate for different roadway crossing contexts.
    - Note approximately how far apart signalized or otherwise enhanced/protected crossing opportunities will be located along the corridor. (The *FHWA STEP Studio* resource contains guidance for crossing spacing.)

- Note if any mid-block transit stops are present along the corridor, and if the project will provide supportive facilities at these locations (e.g., crosswalk markings, signage, median crossing islands, etc.) versus assuming lengthy detours for people walking and rolling.
- Treatments and countermeasures should be sufficient and well-matched to the roadway's context (e.g., appropriate for the speed, volume, crossing distance, and other location attributes).
- If mid-block crossings are restricted or blocked, explain why this is necessary and how pedestrian crossing needs and safety are supported in other ways (e.g., nearest protected or enhanced crossing opportunity).

- **Describe how motorist speed will be managed in the project design, both for through traffic and turning movements.**
  - If known, note the existing and proposed design, operation, and posted speeds, and whether this represents a likely increase or decrease from existing conditions and the expected pedestrian safety impacts of this design decision.
  - Describe any other project-related factors that may affect speed directly or indirectly, even if speed is not the intended outcome (e.g., wider lanes and turning radii to facilitate freight movements, adding turn lanes to alleviate peak hour congestion, etc.), and how these are being mitigated, if known at this time. Note any strategies or treatments being considered that are intended to help motorists drive slower (e.g., visual narrowing, narrow lanes, truck aprons to mitigate wide turning radii, etc.).
  - If your project may result in increased motor vehicle speeds, describe how your project protects pedestrians (e.g., buffers or other separation from moving vehicles, crossing treatments appropriate for higher speed roadways, etc.).

**SCORING GUIDANCE** (X Points)

Projects that will provide the most improvement to pedestrian safety across all four questions will receive full points. Other projects will receive a share of the full points, based on scorer's discretion, considering the following scoring guidance. Weight the responses to all four of these questions equally and consider them cumulatively when scoring. If mid-block crossings are not applicable for the project, and the applicant's explanation adequately shows that pedestrian needs are still being safely met, do not penalize the applicant; consider the responses to the other three questions.

See the *FHWA STEP Studio* resource, *FHWA STEP Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations*, *NCHRP Report 926: Guidance to Improving Pedestrian and Bicyclist Safety at Intersections*, and related resources referenced in the application prompt for state-of-practice guidance on pedestrian-oriented safety design and treatments.

Assume that pedestrians may need to travel along and across the entire extent of the project, and evaluate how well the pedestrian safety countermeasures described serve those needs. Projects that serve those needs with the greatest safety and least pedestrian delay, detour, or discomfort should score highest. For example, projects that provide safe at-grade crossings or comfortable tunnels with minimal detour and elevation change should score higher than projects that include pedestrian bridges requiring lengthy detours and elevation change. Projects that provide frequent crossing opportunities or crossing opportunities well-aligned with transit or other likely places with pedestrian crossing needs should score higher than projects that have infrequent or non-existent protected crossings.

Consider how safely, easily, and comfortably children, older adults, and people with disabilities will be able to navigate crossing the street. Score projects more highly if the safety countermeasures selected are designed to be comfortably used by people of all ages and abilities.

Consider pedestrian-oriented safety treatments in context with motor vehicle design elements. If there are motor vehicle design elements that raise concerns about pedestrian safety (e.g., increased speed, increased crossing distance) that are not fully mitigated by the pedestrian safety countermeasures described, consider a lower score. For roadway expansion projects, where all projects *by definition* will be increasing crossing distance, consider how much additional distance is added as well as the types of countermeasures being considered. If the only element causing an increase in crossing distance is the addition of bike lanes or other bike facilities, especially if the project has reduced other elements to help mitigate this impact (e.g., reducing through lane widths), do not penalize the score for the crossing distance attributable to bike lanes.

Regardless of the speed limit, score projects more highly if they include design elements to help motorists drive slowly. For example, narrow lanes, visual narrowing, and elements to help motorists turn slowly, such as tight turning/corner radius or truck aprons, curb extensions, medians/crossing islands, and hardened centerlines.

## *SUB-MEASURE 2: Existing Location-Based Pedestrian Safety Risk Factors*

These factors are based on based on trends and patterns observed in pedestrian crash analysis done for the Regional Pedestrian Safety Action Plan. Check off how many of the following factors are present. Applicants receive more points if more risk factors are present.

- ☐ Existing road configuration is **<u>either</u>**:
    - One-way, 3+ through lanes
    - Two-way, 4+ through lanes
- ☐ Existing road has a design speed, posted speed limit, or speed study/data showing 85$^{th}$ percentile travel speeds in excess of **<u>either</u>**:
    - 30 MPH or more in Urban Center Thrive community
    - 35 MPH or more elsewhere
- ☐ Existing road has AADT of greater than 7,000 vehicles per day (List the AADT_____)

**SCORING GUIDANCE** (X Points)

Multiply the score from Sub-Measure 1 by the proportion of risk factors indicated to calculate the number of points earned for Sub-Measure 2. Applications where all three factors are present score additional points equal to 100% of their Sub-Measure 1 score. Applications where two of the three factors are present score additional points equal to 2/3 (or 67%) of their Sub-Measure 1 score. And so on. To earn the maximum possible score on Sub-Measure 2, a project would need to earn maximum points on Sub-Measure 1 and also have all 3 risk factors present.

## *SUB-MEASURE 3: Existing Location-Based Pedestrian Safety Exposure Factors*

These factors are based on based on trends and patterns observed in pedestrian crash analysis done for the Regional Pedestrian Safety Action Plan. Check off how many of the following existing location exposure factors are present. Applicants receive more points if more risk factors are present.

- ☐ Existing road has transit running on or across it with 1+ transit stops in the project area
- ☐ Existing road has High Frequency transit running on or across it and 1+ High Frequency stops in the project area
- ☐ Existing road is within 500' of 1+ shopping, dining, or entertainment destinations (e.g., grocery store, restaurant)

  If yes, please describe:

  _____
  _____
  _____
  _____
  _____

- ☐ Existing road is within 500' of other known pedestrian generators (e.g., school, civic/community center, senior housing, multifamily housing, regulatorily designated affordable housing)

  If yes, please describe:

  _____
  _____
  _____
  _____
  _____

- ☐ Project area is in an Urban Center Thrive community

**SCORING GUIDANCE** (X Points)

Multiply the score from Sub-Measure 1 by the proportion of exposure factors indicated to calculate the number of points earned for Sub-Measure 3. Applications where all five factors are present score additional points equal to 100% of their Sub-Measure 1 score. Applications where two of the five factors are present score additional points equal to 2/5 (or 40%) of their Sub-Measure 1 score. And so on. To earn the maximum possible score on Sub-Measure 3 a project would need to earn maximum points on Sub-Measure 1 and also have all 5 exposure factors present.

## Proposed Scoring / Weighting

The current pedestrian safety measure is weighted as 30 points for roadway strategic capacity and roadway reconstruction projects, and 50 points for spot mobility & safety projects. Sub-measures 2 and 3 are scored by multiplying a percentage ranging from 0-100% by the score earned in sub-measure 1, so all three of these elements are effectively weighted equally. If this

measure replaces the existing measure and keeps the same number of points, consider weighting each sub-measure equally in the worksheet as follows:

| *Sub-Measure* | *Points Distribution – Roadway Strategic Capacity and Roadway Modernization* | *Points Distribution – Spot Mobility & Safety* |
|---|---|---|
| *SUB-MEASURE 1: Project-Based Pedestrian Safety Enhancements* | 10 | 16.67 |
| *SUB-MEASURE 2: Existing Location-Based Pedestrian Safety Risk Factors* | 10 | 16.67 |
| *SUB-MEASURE 3: Existing Location-Based Pedestrian Safety Exposure Factors* | 10 | 16.67 |
| *TOTAL POINTS* | *30* | *50* |

## 2. Traffic Counts and Transit Usage

Usage is a criterion in four of the five roadway applications. Project sponsors are asked to use MnDOT traffic maps and transit ridership data as part of an equation that yields person throughput. Traffic counts are typically completed on roadways once every three years.

Given the dramatic decline in traffic volumes, particularly in 2020, should applicants be able to use an older count? This approach would allow for a fairer comparison between projects, so one project is not using a 2019 count (pre-COVID 19) when traffic counts were normal, while another project is using a 2020 count (during the height of COVID when traffic counts were greatly diminished).

Similarly, should applicants use 2019 transit ridership numbers given the dramatic changes in transit ridership in 2020 and 2021?

Usage

This criterion quantifies the project's potential impact by measuring the current daily person throughput and future vehicular traffic that will be served by the project. These roadway users directly benefit from the project improvements.

A. **MEASURE**: Metropolitan Council staff will calculate the current daily person throughput at one location along the A-minor arterial or non-freeway principal arterial project length using the current average annual daily traffic (AADT) volume and average daily transit ridership. If more than one corridor or location is included in the project, then the applicant should select the corridor where the most investment is being made with the project. The applicant must identify the location along the project length and provide the current AADT volume from the *MnDOT Traffic Mapping Application*. Due to the potential timing issues with when a traffic count was taken relative to the COVID-19 pandemic (and resulting drop in traffic volumes), applicants may also use a historic AADT volume from the MnDOT Traffic Mapping Application (instructions under the Help Document). Reference the "Transit Connections" map for transit routes along the project. Ridership data will be provided by the Metropolitan Council staff, if public transit is currently provided on the project length. (85 points)

- Current Daily Person Throughput = (current average annual daily traffic volume x 1.30 vehicle occupancy) + average annual daily transit ridership (2019)

**RESPONSE**:

- Location:_____
- Current AADT volume:_____
- Existing transit routes at the location noted above:_____

Upload the "Transit Connections" map.

**3. Potential Point Changes in Spot Mobility and Safety (Page 26)**
Technical committee members discussed the possibility of increasing the number of Safety points in the Spot Mobility and Safety application category to reflect the increasing number of fatalities on the transportation system relative to past years. One TAC member proposed reallocating the number of points between safety and congestion/air quality by giving 2/3 of the points to safety, and the remaining 1/3 to congestion/air quality (see the Spot Mobility and Safety application cover page for details). This idea will be brought to TAB on July 21st and then any TAB feedback will be brought the following day to this committee. If the concept is generally accepted by TAB, staff requests TAC Funding & Programming feedback on how to allocate the change of points within each criterion (since there are two measures in both Safety and Congestion/Air Quality). As currently shown, the increase in points is applied to the "crashes reduced" measure since the "pedestrian safety" measure will likely be brand new and staff would like to see how it plays out. Points are shown to be removed from the two measures in Congestion/Air Quality in a manner that is proportional to their existing distribution and relative weighting.

**4. Equity Housekeeping (Pages 15-17)**
Two changes are tracked in the equity measures within the attached measures. First, the term "elderly" has been changed to "older adults" to reflect current terminology. Second, the Council has discontinued use of the geography titled "Area of Concentrated Poverty where 50% or more of residents are people of color." This change impacts the "bonus points" in the equity measure and is shown here:

These points will be assigned as follows, based on the highest-scoring geography the project contacts:

a. ~~25 points to projects within an Area of Concentrated Poverty with 50% or more people of color~~
b. ~~20~~ 25 points to projects within an Area of Concentrated Poverty
c. ~~15~~ 20 points to projects within census tracts with the percent of population in poverty or population of color above the regional average percent
d. 10 points for all other areas

**5. Crash Modification Factors (Pages 99-103)**
Proposed new text is shown in roadway measures that states: "As part of the Regional Solicitation Before & After Study, Phase 2 (2021), a list of commonly used crash modification factors was created. Applicants have the option to use these crash modification factors (posted on the Metropolitan Council's Regional Solicitation website, under Application Resources) or find a more appropriate one on FHWA's Clearinghouse."

**6. Affordable Housing**
Prior to 2020, housing was entirely scored with the Housing Performance Score (HPS). For 2020, 20% of the housing score was dedicated to a more project-specific qualitative element (Connection to Affordable Housing).

> Describe and map any affordable housing developments— planned, under construction or existing, within ½ mile of the proposed project. The applicant should note the development stage, number of units, number of bedrooms per unit, and level of affordability using 2019 affordability limits. Also note whether the affordability is guaranteed through funding restrictions (i.e. LIHTC, 4d) or is unsubsidized, if housing choice vouchers are/will be accepted, and if there is a fair housing marketing plan required or in place.

> Describe how the proposed project will improve or impact access for residents of the affordable housing locations within ½ mile of the project. This should include a description of improved access by all modes, automobiles, transit, bicycle and pedestrian access. Since residents of affordable housing are more likely not to own a private vehicle, higher points will be provided to roadway projects that include other multimodal access improvements.

Applicants found it difficult to find all the information being requested. This is particularly true for transit projects that have several stops/stations. Similarly, this was difficult for TDM applicants, who tend not to be connected to housing data.

For the last several cycles, housing has been used as a “carrot” to entice applicants to improve affordable housing policy. The Metropolitan Council’s Community Development staff, however, does not think that this is a successful strategy.

Options for balancing the affordable housing measure:

- Continue to split between HPS and Connection to Affordable Housing
- Go back to solely using the HPS
- Eliminate the HPS and focus entirely on Connection to Affordable Housing.

Staff will be adding options for improving Connection to Affordable Housing prior to the meeting.

# Traffic Management Technologies (Roadway System Management) – Prioritizing Criteria and Measures

**September 15, 2021**

**Definition:** An Intelligent Transportation System (ITS) or similar project that primarily benefits roadway users. Traffic Management Technology projects can include project elements along a single corridor, multiple corridors, or within a specific geographic area such as a downtown area. To be eligible, projects must make improvements to at least one A-minor arterial or non-freeway principal arterial. Projects that are more transit-focused must apply in the Transit Modernization application category.

## Examples of Traffic Management Technology Projects:

- Flashing yellow arrow traffic signals
- Traffic signal retiming projects
- Integrated corridor signal coordination
- Traffic signal control system upgrades
- New/replacement detectors
- Passive detectors for bicyclists and peds
- Other emerging ITS technologies
- New/replacement traffic mgmt. centers
- New/replacement traffic communication
- New/replacement CCTV cameras
- New/replacement variable message signs & other info improvements
- Incident management coordination
- Vehicle to Infrastructure Technology

## Scoring:

| Criteria and Measures | Points | % of Total Points |
|---|---|---|
| **1. Role in the Regional Transportation System and Economy** | **175** | **16%** |
| Measure A - Functional classification of project | 50 | |
| Measure B - Regional Truck Corridor Study Tiers | 50 | |
| Measure C - Integration within existing traffic management systems | 50 | |
| Measure D - Coordination with other agencies | 25 | |
| **2. Usage** | **125** | **11%** |
| Measure A - Current daily person throughput | 85 | |
| Measure B - Forecast 2040 average daily traffic volume | 40 | |
| **3. Equity and Housing Performance** | **100** | **9%** |
| Measure A - Benefits and outreach to disadvantaged populations | 50 | |
| Measure B - Housing Performance Score / affordable housing connection | 50 | |
| **4. Infrastructure Age** | **75** | **7%** |
| Measure A - Upgrades to obsolete equipment | 75 | |
| **5. Congestion Reduction/Air Quality** | **200** | **18%** |
| Measure A - Congested roadway | 150 | |
| Measure B - Emissions and congestion benefits of project | 50 | |
| **6. Safety** | **200** | **18%** |

| Criteria and Measures | | Points | % of Total Points |
|---|---|---|---|
| | Measure A - Crashes reduced | 50 | |
| | Measure B – Safety issues in project area | 150 | |
| **7.** | **Multimodal Elements and Existing Connections** | **50** | **5%** |
| | Measure A - Transit, bicycle, or pedestrian project elements and connections | 50 | |
| **8.** | **Risk Assessment** | **75** | **7%** |
| | Measure A - Risk Assessment Form | 75 | |
| **9.** | **Cost Effectiveness** | **100** | **9%** |
| | Measure A - Cost effectiveness (total points awarded/total project cost) | 100 | |
| **Total** | | **1,100** | |

## *1. Role in the Regional Transportation System and Economy (175 Points)*

Tying regional policy (Thrive MSP2040) to the Regional Solicitation, this criterion measures the project's ability to serve a transportation purpose within the regional transportation system and economy based on how well it fulfills its functional classification role, aligns with the Regional Truck Corridor Study, and integrates with existing traffic management systems, and provides coordination across agencies. The project must be located on at least one non-freeway principal arterial or A-minor arterial.

A. **MEASURE:** Reference the functional classification(s) that the project would serve. Investment in a higher functionally classified roadway (i.e., the principal arterial system) serves a more regional purpose and will result in more points.

**RESPONSE** (Select one):

- The majority of the project funds will be invested on the principal arterial system: ☐ (50 points)
- The majority of the project funds will be invested on the A-minor arterial system: ☐ (25 points)
- The majority of the project funds will be invested on the collector or local system with some investment either on the principal arterial or A-minor arterial system: ☐ (0 points)

**SCORING GUIDANCE** (50 Points)

The scorer will assign points based on which of the above scores applies. Note that multiple applicants are able to score the maximum point allotment. If no applicant scores 50 points, the 25-point projects will be adjusted to 50 points, while the zero-point projects will remain at zero.

B. **MEASURE**: This criterion relies on the results of the Regional Truck Corridor Study, which prioritized all principal and minor arterials based on truck volume, truck percentage of total traffic, proximity to freight industry clusters, and proximity to regional freight terminals. The truck corridors were grouped into tiers 1, 2, and 3, in order of priority. Use the 2021 Updated Regional Truck Corridors tiers to respond to this measure: *2021 Updated Regional Truck Corridors.* (50 points)

## Traffic Management Technologies

~~Use the final study report for this measure:~~

**RESPONSE** (Select one for your project, based on the updated 2021 Regional Truck Corridor~~s Study~~):

- The majority of the project funds will be invested on either a Tier 1, Tier 2, or Tier 3 corridor: ☐ (50 Points) Miles (to the nearest 0.1 miles):_____
- A majority of the project funds will NOT be invested on a Tier 1, Tier 2, or Tier 3 corridor, but at least 10 percent of the funds will be invested on these corridors: ☐ (25 Points) Miles (to the nearest 0.1 miles) :_____
- No project funds will be invested on a Tier 1, Tier 2, or Tier 3 corridor: ☐ (0 Points)

**SCORING GUIDANCE** (50 Points)

The scorer will assign points based on which of the scores applies. Note that multiple applicants can score the maximum point allotment. If no applicant scores 50 points, the 25-point projects will be adjusted to 50 points, while the zero-point projects will remain at zero.

C. **MEASURE**: Discuss how the proposed project integrates and/or builds on existing traffic management infrastructure (examples of systems include traffic signal systems, freeway management systems, and incident management systems). (50 Points)

**RESPONSE** (Limit 2,800 characters; approximately 400 words):

**SCORING GUIDANCE** (50 Points)

The applicant will describe how the project would build on other infrastructure and management systems. Prioritizing projects that complement existing infrastructure and management methods, the scorer will award the full share of points to the project that best builds on other infrastructure and management systems. Remaining projects will receive a share of the full points at the scorer's discretion. This response is intended to be qualitative.

D. **MEASURE**: Demonstrate how the project provides or enhances coordination among operational and management systems and/or jurisdictions. (25 points)

**RESPONSE** (Limit 2,800 characters; approximately 400 words):

**SCORING GUIDANCE** (25 Points)

The project that best provides or enhances coordination among operational and management systems and/or jurisdictions will receive the full points. Remaining projects will receive a share of the full points at the scorer's discretion.

## 2. *Usage (125 Points)*

This criterion quantifies the project's potential impact by measuring the current daily person throughput and future vehicular traffic that will be served by the project. These roadway users directly benefit from the project improvements.

A. **MEASURE**: Metropolitan Council staff will calculate the current daily person throughput at one location along the A-minor arterial or non-freeway principal arterial project length using the current average annual daily traffic (AADT) volume and average daily transit ridership. If more than one corridor or location is included in the project, then the applicant should select the corridor where the most investment is being made with the project. The applicant must identify the location along the project length and provide the current AADT volume from the *MnDOT Traffic Mapping Application*.~~*MnDOT 50-series maps* (select Twin Cities Metro Area Street Series under Traffic Volume (AADT))~~ Due to the potential timing issues with when a traffic count was taken relative to the COVID-19 pandemic (and resulting drop in traffic volumes), applicants may also use a historic AADT volume from the MnDOT Traffic Mapping Application (instructions under the Help Document). Reference the "Transit Connections" map for transit routes along the project. Ridership data will be provided by the Metropolitan Council staff, if public transit is currently provided on the project length. (85 points)

- Current Daily Person Throughput = (current average annual daily traffic volume x 1.30 vehicle occupancy) + average annual daily transit ridership (2019)

**RESPONSE**:

- Location:_____
- Current AADT volume:_____
- Existing transit routes at the location noted above:_____

Upload the "Transit Connections" map.

**SCORING GUIDANCE** (85 Points)

The project with highest current daily person throughput will receive the full points for the measure. Remaining projects will receive a proportionate share of the full points. For example, if the application being scored had a daily person throughput of 1,000 people and the top project had a daily person throughput of 1,500 people, this applicant would receive (1,000/1,500) *85 points or 56 points.

B. **MEASURE**: Provide the forecast (2040) average daily traffic volume at the same location along the A-minor arterial or non-freeway principal arterial project length, as identified in the previous measure. The applicant may choose to use a county or city travel demand model based on the Metropolitan Council model to identify the forecast (2040) average daily traffic volume or have Metropolitan Council staff determine the forecast volume using the Metropolitan Council model and project location. Respond as appropriate to the use of one type of forecast model. (40 points)

**RESPONSE**:

- Use Metropolitan Council model to determine forecast (2040) ADT volume☐
- If checked, METC Staff will provide Forecast (2040) ADT volume ☐



**Commented [PS1]:** New text

**Commented [PS2]:** Confirm year

**OR**

**RESPONSE**:

- Identify the approved county or city travel demand model to determine forecast (2040) ADT volume☐
- Forecast (2040) ADT volume: _____

**SCORING GUIDANCE** (40 Points)

The applicant with the highest forecast (2040) ADT volume will receive the full points for the measure. Remaining projects will receive a proportionate share of the full points. For example, if the application being scored had a daily forecast of 28,000 vehicles and the top project had a daily forecast of 32,000 vehicles, this applicant would receive (28,000/32,000)* 40 points or 35 points.

## *3. Equity and Housing Performance (100 Points)*

This criterion addresses the *Council's role in advancing equity* by examining how a project directly provides benefits to, or impacts (positive and negative) low-income populations, people of color, people with disabilities, youth and ~~the elderly~~older adults. The criterion evaluates whether the applicant engaged these populations to identify transportation needs and potential solutions and how the project will address these identified needs. The criterion also evaluates a community's overall efforts to implement affordable housing and how the project improves multimodal access to affordable housing residents.

A. **MEASURE**: Socio-Economic Equity

1. **Sub-measure**: Equity Population Engagement (0 to 20 points): A successful project is one that is the result of active engagement of low-income populations, people of color, persons with disabilities, youth and ~~the elderly~~older adults. Engagement should occur prior to and during a project's development, with the intent to provide direct benefits to, or solve, an expressed transportation issue, while also limiting and mitigating any negative impacts. Describe and map the location of any low-income populations, people of color, disabled populations, youth or ~~the elderly~~older adults within a ½ mile of the proposed project. Describe how these specific populations were engaged ~~and provided outreach to~~, whether through community planning efforts, project needs identification, or during the project development process. Describe what engagement methods and tools were used and how the input from these groups is reflected in the project's~~'~~ purpose and need and design. Elements of quality engagement include: outreach and engagement to specific communities and populations that are likely to be directly impacted by the project; techniques to reach out to populations traditionally not involved in community engagement related to transportation projects; feedback from these populations identifying potential positive and negative elements of the proposed project through engagement, study recommendations, or plans that provide feedback from populations that may be impacted by the proposed project. If relevant, describe how NEPA or Title VI regulations will guide engagement activities.

(Limit 1,400 characters; approximately 200 words):

2. **Sub-measure:** Equity Population Benefits and Impacts (0 to 30 points): A successful project is one that has been designed to provide direct benefits to low-income populations, people of color, persons with disabilities, youth and ~~the elderly~~older adults. All projects must mitigate potential negative benefits as required under federal law. Projects that are designed to provide benefits go beyond the mitigation requirement to proactively provide transportation benefits and solve transportation issues experienced by Equity populations.

   a. (0 to 30 points) Describe the project's benefits to low-income populations, people of color, children, people with disabilities, and ~~the elderly~~older adults. Benefits could relate to pedestrian and bicycle safety improvements; public health benefits; direct access improvements for residents or improved access to destinations such as jobs, school, health care or other; travel time improvements; gap closures; new transportation services or modal options, leveraging of other beneficial projects and investments; and/or community connection and cohesion improvements. Note that this is not an exhaustive list.

   | (Limit 2,800 characters; approximately 400 words): |
   |---|

   b. (-10 to 0 points) Describe any negative impacts to low-income populations, people of color, children, people with disabilities, and ~~the elderly~~older adults created by the project, along with measures that will be taken to mitigate them. Negative impacts that are not adequately mitigated can result in a reduction in points.

   | (Limit 2,800 characters; approximately 400 words): |
   |---|

   Below is a list of negative impacts. Note that this is not an exhaustive list.

   - Increased difficulty in street crossing caused by increased roadway width, increased traffic speed, wider turning radii, or other elements that negatively impact pedestrian access.
   - Increased noise.
   - Decreased pedestrian access through sidewalk removal / narrowing, placement of barriers along the walking path, increase in auto-oriented curb cuts, etc.
   - Project elements that are detrimental to location-based air quality by increasing stop/start activity at intersections, creating vehicle idling areas, directing an increased number of vehicles to a particular point, etc.
   - Increased speed and/or "cut-through" traffic.
   - Removed or diminished safe bicycle access.
   - Inclusion of some other barrier to access to jobs and other destinations.
   - Displacement of residents and businesses.
   - Mitigation of temporary construction/implementation impacts such as dust; noise; reduced access for travelers and to businesses; disruption of utilities; and eliminated street crossings.
   - Other

3. **Sub-measure: Bonus Points (0 to 25 points)** Those projects that score at least 80% of the maximum total points available through sub-measures 1 and 2 will be awarded bonus points based on the geographic location of the project. These points will be assigned as follows, based on the highest-scoring geography the project contacts:
   ~~a. 25 points to projects within an Area of Concentrated Poverty with 50% or more people of color~~
   ~~b.~~a. ~~20~~ 25 points to projects within an Area of Concentrated Poverty
   ~~c.~~b. ~~15~~ 20 points to projects within census tracts with the percent of population in poverty or population of color above the regional average percent
   ~~d.~~c. 10 points for all other areas

   Upload the "Socio-Economic Conditions" map used for this measure.

   **RESPONSE** (Select one, based on the "Socio-Economic Conditions" map):

   - ~~Project is located in an Area of Concentrated Poverty where 50% or more of residents are people of color (ACP50): ☐~~
   - Project is located in an Area of Concentrated Poverty: ☐
   - Project's census tracts are above the regional average for population in poverty or population of color: ☐
   - Project located in a census tract that is below the regional average for population in poverty or populations of color~~, or includes children, people with disabilities, or the elderly~~: ☐

**SCORING GUIDANCE** (50 Points)

Each application will be qualitatively scored based on the available points for each measure and will receive the number of points awarded. If the applicant receives at least 80% of the available points, i.e., 40 points for the Roadway applications, the project will receive Bonus points as described under sub-measure 3. If an applicant qualifies for Bonus points it will result in a Socio-Economic Equity score of more than the total points available.

B. **MEASURE**: Projects will be scored based on two housing measures: 1. the 2019 Housing Performance Score for the city or township in which the project is located (40 points) and 2. the project's connection to affordable housing (10 points) as described below.

   **Part 1 (40 points): Housing Performance Score**

   A city or township's housing performance score is calculated annually by the Metropolitan Council using data from four categories: new affordable or mixed-income housing completed in the last ten years; preservation projects completed in the last seven years and/or substantial rehabilitation projects completed in the last three years; housing program participation and production, and housing policies and ordinances; and characteristics of the existing housing stock. Data for the housing performance scores are updated each year by the Council, and the city or township is provided with an opportunity to review and revise the information.

   Council staff will use the most current housing score for each city or township. If the project is located in more than one jurisdiction, the points will be awarded based on a weighted average using the percent of total funds to be spent in each jurisdiction. If a project is located in a city or township with no allocation of affordable housing need (either there is no forecasted household growth or the area does not have land to support sewered development), the project will not be

disadvantaged by this measure and the project's total score will be adjusted during scoring to remove this scoring measure.

**RESPONSE**:

- City/Township: _____
- Total project cost: _____
- Funds to be spent within each City/Township: _____
- Percent of total funds to be spent within City/Township: _____

**Part 2 (10 points): Affordable Housing Access**

This measure is a qualitative scoring measure. Describe and map any affordable housing developments— planned, under construction or existing, within ½ mile of the proposed project. The applicant should note the development stage, number of units, number of bedrooms per unit, and level of affordability using 2019 affordability limits. Also note whether the affordability is guaranteed through funding restrictions (i.e. LIHTC, 4d) or is unsubsidized, if housing choice vouchers are/will be accepted, and if there is a fair housing marketing plan required or in place.

Describe how the proposed project will improve or impact access for residents of the affordable housing locations within ½ mile of the project. This should include a description of improved access by all modes, automobiles, transit, bicycle and pedestrian access. Since residents of affordable housing are more likely not to own a private vehicle, higher points will be provided to roadway projects that include other multimodal access improvements.

**RESPONSE**:

(Limit 2,100 characters; approximately 300 words):

**SCORING GUIDANCE** (50 Points)

Part 1 (40 points): The applicant with the highest 2019 Housing Performance Score will receive the full points. Remaining projects will receive a proportionate share of the full points. For example, if the application being scored had a Housing Performance Score of 55 and the top project had a Housing Performance Score of 90, this applicant would receive (55/90)*40 points or 24 points.

Projects will use the city Housing Performance Score based on the project location. If a project is located in more than one jurisdiction, the points will be awarded based on a weighted average of the city or township scores for the project location based on the funds spent in each jurisdiction.

If a project is located in a city or township with no allocation of affordable housing need (either there is no forecasted household growth or the area does not have land to support sewered development), the project's total score will be adjusted as a result. If this is the case, the hold-harmless method will be used: the total points possible in the application will be 960 instead of 1,000. The total points awarded through the rest of the application (900 as a hypothetical example) will be divided by 960, then multiplied by 1,000. Therefore, a project scoring 900 out of 960, will equate to 938 points on a 1,000-point scale. If a portion of the project is located in a city with an affordable housing allocation and the other portion is located in a township with no affordable housing allocation, then a combination of the Housing Performance Score (or weighted average) and the hold-harmless method should be used. This will result in a total score that will be somewhere between 960 and 1,000; then the score will need to be adjusted to fit a 1,000-point scale. NOTE: Any community without a Housing Performance Score

in 2019 will be awarded the better of its new score in 2020 and the above method. NOTE: in these cases, the raw points from Part 2 will be included in the 960-point total.

Part 2 (10 points): The project that best provides meaningful improvements to access to the affordable housing units will receive the full 10 points. Multiple projects may receive the highest possible score of 10 points based on this assessment. Remaining projects will receive a share of the full points at the scorer's discretion.

Final Score (50 points): The scores in Parts 1 and 2 will be totaled. If no application gets 50 points, the highest-scoring project will be awarded 50 points, with other projects adjusted proportionately.

Note: Metropolitan Council staff will score this measure.

## 4. *Infrastructure Age (75 Points)*

This criterion will assess the degree to which functionally obsolete infrastructure elements are being replaced and improved.

A. **MEASURE**: Describe how various equipment will be improved or replaced as part of this project relative to its age and whether it is functionally obsolete.

**RESPONSE** (Limit 2,800 characters; approximately 400 words):

**SCORING GUIDANCE** (75 Points)

The project that best provides for stewardship of public funds and resource by replacing functionally obsolete equipment and finding cost-effective solutions to upgrade viable equipment will receive the full points. Remaining projects will receive a share of the full points at the scorer's discretion.

## 5. *Congestion Reduction/Air Quality (200 Points)*

This criterion measures the project's ability to make improvements in congested corridors using speed data from the Congestion Management Process Plan. The project will also be measured based on its ability to reduce emissions.

**MEASURE**: Council staff will provide travel speed data to compare the peak hour travel speed in the project area to free flow conditions on the "Level of Congestion" map. If more than one corridor or location is included in the project, then the applicant should select the corridor on which the most investment is being made with the project. The applicant must identify the corridor as part of the response. ~~It is anticipated that the Congestion Management Process Plan will be further incorporated into the Regional Solicitation as part of the 2022 Regional Solicitation funding cycle.~~ (150 Points)

**RESPONSE**:

- Corridor:_____
- Corridor Start and End Points:_____
- Free-Flow Travel Speed:_____
- Peak Hour Travel Speed:_____
- Percentage Decrease in Travel Speed in Peak Hour Compared to Free-Flow (online calculation):_____

Upload the "Level of Congestion" map used for this measure.

**SCORING GUIDANCE** (150 Points)

The applicant with the most congestion (measured by the largest percentage decrease in peak hour travel speeds relative to free flow conditions) will receive the full points for the measure. Remaining projects will receive a proportionate share of the points. For example, if the application being scored showed a 5% decrease of travel speeds in the peak hour relative to free flow conditions and the top project had a 10% reduction, this applicant would receive (5/10)*150 points, or 75 points.

B. **MEASURE**: Discuss how the project will reduce emissions and congestion. The applicant should focus on any reduction in CO, NOX, and VOC. Projects on roadways that provide relief to congested, parallel principal arterial roadways should reference the current MnDOT Metro Freeway Congestion Report and discuss the systemwide emissions and congestion impact of the proposed improvements.

**RESPONSE**: (Limit 2,800 characters; approximately 400 words):

**SCORING GUIDANCE** (50 Points)

The project that is most likely to reduce emissions and congestion will receive the full points. Remaining projects will receive a share of the full points at the scorer's discretion.

## *6. Safety (200 Points)*

This criterion addresses the project's ability to correct deficiencies and improve the overall safety of an existing or future roadway facility. It will assess the project's monetized safety benefits.

A. **MEASURE**: Calculate the reduction in the total number of crashes due to improvements on the A-minor arterial or non-freeway principal arterial made by the project. The applicant must base the estimate of crash reduction on the methodology consistent with the latest MnDOT Metro District Highway Safety Improvement Program (HSIP) application (*www.dot.state.mn.us/stateaid/trafficsafety.html*). Applicants should focus on the crash analysis for reactive projects.

Crash data must be obtained for the project length using the MnDOT TIS system average for calendar years ~~2016~~ 2018 through ~~2018~~2020. Crash data should include all crash types and severities, including pedestrian and bicycle crashes.

Applicants should request crash data from MnDOT as early as possible. The applicant must then attach a listing of the crashes reduced and the HSIP Benefit/Cost (B/C) worksheet (*www.dot.state.mn.us/stateaid/trafficsafety.html*) that identifies the resulting benefit associated with the project. As part of the response, please detail and attach the crash modification factor(s) used from FHWA's Crash Modification Factors Clearinghouse: *http://www.cmfclearinghouse.org/*. As part of the Regional Solicitation Before & After Study, Phase 2 (2021), a list of commonly used crash modification factors was created. Applicants have the option to use these crash modification factors (posted on the Metropolitan Council's Regional Solicitation website, under Application Resources) or find a more appropriate one on FHWA's Clearinghouse.

**Commented [PS3]:** New text

This measure requests the monetized safety benefit of the project. The cost of the project is scored in the Cost Effectiveness criterion.

**RESPONSE**:

- Crash Modification Factors Used (Limit 700 characters; approximately 100 words): _____
- Rationale for Crash Modifications Selected (Limit 1,400 characters; approximately 200 words): _____
- Project Benefit ($) from B/C ratio: _____
- Total Fatal (K) Crashes: _____
- Total Serious Injury (A) Crashes: _____
- Total Non-Motorized Fatal and Serious Injury Crashes: _____
- Total Crashes: _____
- Total Fatal (K) Crashes Reduced by Project: _____
- Total Serious Injury (A) Crashes Reduced by Project: _____
- Total Non-Motorized Fatal and Serious Injury Crashes Reduced by Project: _____
- Total Crashes Reduced by Project: _____

Upload Crash Modification Factors and B/C Worksheet.

**SCORING GUIDANCE** (50 Points)

The applicant with the highest dollar value of benefits will receive the full points for the measure. Remaining projects will receive a proportionate share of the full points. For example, if the application being scored had safety benefits of $11,000,000 and the top project had safety benefits of $16,000,000, this applicant would receive (11,000,000/16,000,000)* 50 points or 34 points.

B. **MEASURE**: Discuss how the project will improve safety issues in the project area. As part of the response, the applicant may want to reference the project relative to County Highway Safety Plan or similar planning documents and what the project will specifically do to improve the safety issue.

**RESPONSE** (Limit 2,800 characters; approximately 400 words):

**SCORING GUIDANCE** (150 Points)

The project that will provide the most safety benefits and alleviate identified safety concerns will receive the full points. Remaining projects will receive a share of the full points at the scorer's discretion.

**Commented [PS4]:** See information item for proposed new text, which would replace this content.

## *7. Multimodal Elements and Existing Connections (50 Points)*

This criterion measures how the project improves the travel experience, safety, and security for other modes of transportation, and addresses the safe integration of these modes. The Transportation Policy Plan requires that explicit consideration of all users of the transportation system be considered in the planning and scoping phase of roadway projects.

A. **MEASURE**: Describe how the project positively affects the multimodal system.

- Discuss any bicycle, pedestrian, or transit elements that are included as part of the project and how they improve the travel experience, safety, and security for users of these modes. Applicants should make sure that new multimodal elements described in the response are accounted for as part of the cost estimate form earlier in the application. Applicants should note if there is no transit service in the project area and identify supporting studies or plans that address why a mode may not be incorporated in the project (e.g., a bicycle system plan that locates bikeway facilities on a lower-volume parallel route).

- Describe how the proposed multimodal improvements positively affect identified alignments in the Regional Bicycle Transportation Network (RBTN) or along a regional trail, if applicable.
- Describe how the proposed multimodal improvements either provide a new, or improve an existing Major River Bicycle Barrier Crossing (MRBBC) as defined in the 2040 Transportation Policy Plan (TPP) or how they provide a new or improved crossing of a Regional Bicycle Barrier with respect to the tiered Regional Bicycle Barrier Crossing Improvement Areas as defined in the TPP and Technical Addendum to the Regional Bicycle Barriers Study (May 2019), if applicable.
- Discuss the existing bicycle, pedestrian, and transit connections and how the project enhances these connections.
- Discuss whether the project implements specific locations identified as being deficient in a completed ADA Transition Plan.

**RESPONSE** (Limit 2, 800 characters; approximately 400 words)

**SCORING GUIDANCE** (50 Points)

The project that most positively affects the multimodal system will receive the full points. Remaining projects will receive a share of the full points at the scorer's discretion. The project score will be based on the quality of the improvements, as opposed to being based solely on the number of modes addressed. Points can be earned for incorporating multimodal project elements, positively affecting identified alignments in the Regional Bicycle Transportation Network (RBTN) regional trail, Major River Bicycle Barrier Crossing, or Regional Bicycle Barrier, for making connections with existing multimodal systems, or helping to implement an ADA Transition Plan. Projects do not need all of these elements to be awarded all of the points. Multimodal elements for rural roadway projects may include wider shoulders that will be used by bicyclists and pedestrians.

## *8. Risk Assessment (75 Points)*

This criterion measures the number of risks associated with successfully building the project. High-risk applications increase the likelihood that projects will withdraw at a later date. If this happens, the region is forced to reallocate the federal funds in a short amount of time or return them to the US Department of Transportation. These risks are outlined in the checklist in the required Risk Assessment.

**MEASURE**: Applications involving construction must complete the Risk Assessment. This checklist includes activities completed to-date, as well as an assessment of risks (e.g., right-of-way acquisition, proximity to historic properties, etc.).

**RESPONSE** (Complete Risk Assessment):

Please check those that apply and fill in anticipated completion dates for all projects~~,~~ ~~except for n~~New/expanded transit service projects will receive full credit for items 2-5 but must fill out item 1. ~~or t~~Transit vehicle purchases will receive full credit.

1. **Public Involvement (20 Percent of Points)**

   Projects that have been through a public process with residents and other interested public entities are more likely than others to be successful. The project applicant must indicate that events and/or targeted outreach (e.g., surveys and other web-based input) were held to help identify the transportation problem, how the potential solution was selected instead of other

options, and the public involvement completed to date on the project. The focus of this section is on the *opportunity for public input* as opposed to the quality of input. NOTE: A written response is required and failure to respond will result in zero points.

~~List Dates of most recent meetings and outreach specific to this project:~~

- ~~Meeting with general public: _____~~
- ~~Meeting with partner agencies: _____~~
- ~~Targeted online/mail outreach: _____~~
  - ~~Number of respondents: _____~~

100% ☐ Multiple types of targeted outreach efforts (such as meetings or online/mail outreach)~~Meetings~~ specific to this project with the general public and partner agencies have been used to help identify the project need.

~~75% ☐ Targeted outreach specific to this project with the general public and partner agencies have been used to help identify the project need.~~

50% ☐ At least one meeting specific to this project with the general public has been used to help identify the project need.

50% ☐ At least ~~one meeting~~ online/mail outreach effort specific to this project with the general public ~~key partner agencies~~ has been used to help identify the project need.

25% ☐ No meeting or outreach specific to the project was conducted, but the project was identified through meetings and/or outreach related to a larger planning effort.

0% ☐ No outreach has led to the selection of this project.

**RESPONSE** (Limit 2,800 characters; approximately 400 words). Describe the type(s) of outreach selected for this project (i.e., online or in-person meetings, surveys, demonstration projects), the method(s) used to announce outreach opportunities, and how many people participated. Include any public website links to outreach opportunities.~~:~~

2. **Layout (25 Percent of Points)**
   Layout ~~should~~ includes proposed geometrics and existing and proposed right-of-way boundaries. A basic layout should include a base map (north arrow; scale; legend;* city and/or county limits; existing ROW, labeled; existing signals;* and bridge numbers*) and design data (proposed alignments; bike and/or roadway lane widths; shoulder width;* proposed signals;* and proposed ROW). An aerial photograph with a line showing the project's termini does not suffice and will be awarded zero points.

   *If applicable

   100% ☐ Layout approved by the applicant and all impacted jurisdictions (i.e., cities/counties/MnDOT ~~that the project goes through or agencies that maintain the roadway(s))~~. If a MnDOT trunk highway is impacted, approval by MnDOT must have occurred to receive full points.~~-~~ **A PDF of the layout must be attached along with letters from each jurisdiction to receive points.**

100% ☐ A layout does not apply (signal replacement/signal timing, stand-alone streetscaping, minor intersection improvements). Applicants that are not certain whether a layout is required should contact Colleen Brown at MnDOT Metro State Aid – colleen.brown@state.mn.us.

50% ☐ Layout completed but not approved by all jurisdictions. **A PDF of the layout must be attached to receive points.**

25% ☐ Layout has been started but is not complete. **A PDF of the layout must be attached to receive points.**

0% ☐ Layout has not been started

~~3. Anticipated date or date of completion: _____~~

**~~4.~~3. Review of Section 106 Historic Resources (15 Percent of Points)**

100% ☐ No known historic properties eligible for or listed in the National Register of Historic Places are located in the project area, and project is not located on an identified historic bridge

100% ☐ There are historical/archeological properties present but determination of "no historic properties affected" is anticipated.

80% ☐ Historic/archeological property impacted; determination of "no adverse effect" anticipated

40% ☐ Historic/archeological property impacted; determination of "adverse effect" anticipated

0% ☐ Unsure if there are any historic/archaeological properties in the project area.

Project is located on an identified historic bridge: ☐

**~~5.~~4. Right-of-Way (25 Percent of Points)**

100% ☐ Right-of-way, permanent or temporary easements, and MnDOT agreement/limited-use permit either not required or all have been acquired

50% ☐ Right-of-way, permanent or temporary easements, and/or MnDOT agreement/limited-use permit required~~,~~ - plat, legal descriptions, or official map complete

25% ☐ Right-of-way, permanent or temporary easements, and/or MnDOT agreement/limited-use permit required~~,~~ - parcels identified

0% ☐ Right-of-way, permanent or temporary easements, and/or MnDOT agreement/limited-use permit required~~,~~ – parcels not all identified

~~Anticipated date or date of acquisition _____~~

**~~6.~~5. Railroad Involvement (15 Percent of Points)**

100% ☐ No railroad involvement on project or railroad Right-of-Way agreement is executed (include signature page, if applicable)

50% ☐ Railroad Right-of-Way Agreement required; negotiations have begun

0% ☐ Railroad Right-of-Way Agreement required; negotiations have not begun.

Anticipated date or date of executed Agreement _____

**SCORING GUIDANCE** (75 Points)

The applicant with the most points on the Risk Assessment (more points equate to less project risk) will receive the full points for the measure. Remaining projects will receive a proportionate share of the full points. For example, if the application being scored had 40 points and the top project had 70 points, this applicant would receive (40/70)*75 points or 43 points.

## *9. Cost Effectiveness (100 Points)*

This criterion will assess the project's cost effectiveness based on the total TAB-eligible project cost (not including noise walls) and total points awarded in the previous 8 criteria.

A. **MEASURE**: Calculate the cost effectiveness of the project. Metropolitan Council staff will divide the number of points awarded in the previous criteria by the TAB-eligible project cost (not including noise walls). If a project has been awarded other outside, competitive funding (e.g., state bonding, Transportation Economic Development Program, Minnesota Highway Freight Program), project sponsors may reduce the total project cost for the purposes of this scoring measure by the amount of the outside funding award.

- Cost effectiveness = total number of points awarded in previous criteria/total TAB-eligible project cost (not including noise walls)

**RESPONSE** (This measure will be calculated after the scores for the other measures are tabulated by the Scoring Committee):

- Total Project Cost (entered in Project Cost Form):_____ (automatically calculated)
- Enter amount of Noise Walls: _____
- Enter amount of any outside, competitive funding (attach documentation of award): _____
- Points Awarded in Previous Criteria: ____ (entered by Metropolitan Council staff)

**SCORING GUIDANCE** (100 Points)

The applicant with the most points (i.e., the benefits) per dollar will receive the full points for the measure. Remaining projects will receive a proportionate share of the full points. For example, if the top project received .0005 points per dollar and the application being scored received .00025 points per dollar, this applicant would receive (.00025/.0005)*100 points or 50 points.

The scorer for this measure will also complete a reasonableness check of the total project cost that is used for this measure. The scorer may follow up with the applicant to clarify any questions. Up to 50 percent of points awarded for this measure can be deducted if the scorer does not believe that the cost estimate is reasonable.

# Spot Mobility and Safety

**Prioritizing Criteria and Measures**

**September 15, 2021**

**Definition:** An at-grade intersection or corridor-level intersection improvement project that focuses on mobility and safety (described as a Regional Mobility project under Spot Mobility in the TPP). New interchanges or projects that add new thru lane capacity (e.g., two-lane to four-lane expansions) should apply in the Strategic Capacity application category. Projects that address mobility and safety at multiple intersections on a corridor are encouraged. However, projects that propose to reconstruct the roadway for the length of the corridor should apply in the Roadway Reconstruction/Modernization application category.

## Examples of Spot Mobility and Safety Projects:

- New or extended turn lanes at one or more intersections
- New intersection controls such as roundabouts or traffic signals
- Unsignalized or signalized reduced conflict intersections
- Other innovative/alternative intersection designs such as green t-intersections

## Scoring:

| Criteria and Measures | Points | % of Total Points |
|---|---|---|
| **1. Role in the Regional Transportation System and Economy** | **175** | **16%** |
| Measure A - Congestion within the Project Area, Level of Adjacent Congestion, Principal Arterial Intersection Conversion Study Priorities, or Congestion Management Safety Plan Opportunity Areas | 100 | |
| Measure B - Regional Truck Corridor Study Tiers | 75 | |
| **2. Equity and Housing Performance** | **100** | **9%** |
| Measure A - Benefits and outreach to disadvantaged populations | 50 | |
| Measure B - Housing Performance Score / affordable housing connection | 50 | |
| **3. Congestion Reduction/Air Quality** | **275~~190~~** | **~~25%~~17%** |
| Measure A - Vehicle delay reduced | ~~200~~ 140 | |
| Measure B - Kg of emissions reduced | ~~75~~ 50 | |
| **4. Safety** | **275 360** | **~~25~~33%** |
| Measure A - Crashes reduced | ~~225~~310 | |
| Measure B - Pedestrian Crash Reduction (Proactive) | 50 | |
| **5. Multimodal Elements and Existing Connections** | **100** | **9%** |
| Measure A - Transit, bicycle, or pedestrian project elements & connections | 100 | |
| **6. Risk Assessment** | **75** | **7%** |
| Measure A - Risk Assessment Form | 75 | |
| **7. Cost Effectiveness** | **100** | **9%** |
| Measure A - Cost effectiveness (total points awarded/total project cost) | 100 | |
| **Total** | **1,100** | |

## *1. Role in the Regional Transportation System and Economy (175 Points)*

Tying regional policy (Thrive MSP2040) to the Regional Solicitation, this criterion measures the project's ability to serve a transportation purpose within the regional transportation system and economy based on the congestion in the project area, congestion levels along the regional transportation system near the project, how it aligns with the Principal Arterial Intersection Conversion Study, Congestion Management Safety Plan IV, , and the Regional Truck Corridor Study.

A. **MEASURE**: Identify the level of congestion within the project area. This measure uses speed data as was used as part of the Congestion Management Process (CMP) Plan. It is anticipated that the CMP Plan will be further incorporated into the Regional Solicitation as part of the 2022 Regional Solicitation funding cycle. Also, identify the level of congestion on a parallel route and how the project area is prioritized in the Principal Arterial Intersection Conversion Study and Congestion Management Safety Plan IV. Respond to each of the four sub-sections below. Projects will get the highest score of the four sub-sections.

### Congestion within Project Area:

The measure will analyze the level of congestion within the project area. Council staff will provide travel speed data on the "Level of Congestion" map. The analysis will compare the peak hour travel speed within the project area to free-flow conditions.

**RESPONSE**:

- Free-Flow Travel Speed: _____
- Peak Hour Travel Speed: _____
- Percentage Decrease in Travel Speed in Peak Hour Compared to Free-Flow (calculation): _____

Upload the "Level of Congestion" map used for this measure.

### Congestion on adjacent Parallel Routes:

The measure will analyze the level of congestion on an adjacent parallel A-minor arterial or principal arterial to determine the importance of the roadway in managing congestion on the Regional Highway System. Council staff will provide travel speed data on an applicant-selected adjacent parallel route that is adjacent to the proposed project on the "Level of Congestion" map. The analysis will compare the peak hour travel speed on an adjacent parallel route to free-flow conditions on this same route to understand congestion levels in the area of the project, which correlates to the role that the project plays in the regional transportation system and economy. The applicant must identify the adjacent parallel corridor as part of the response. The end points of this adjacent parallel corridor must align as closely as possible to the project end points.

**RESPONSE**:

- Adjacent Parallel Corridor: _____
- Adjacent Parallel Corridor Start and End Points: _____
- Free-Flow Travel Speed): _____
- Peak Hour Travel Speed: _____
- Percentage Decrease in Travel Speed in Peak Hour Compared to Free-Flow (calculation): _____

Upload the "Level of Congestion" map used for this measure.

### Principal Arterial Intersection Conversion Study:

The measure relies on the results of the Principal Arterial Intersection Conversion Study, which prioritized non-freeway principal arterial intersections. In addition to interchange projects, other lane expansion projects that make improvements to a low-, medium-, or high-priority intersection can also earn points in this measure.

Use the final study report for this measure: *metrocouncil.org/PAICs*

**RESPONSE** *(Select one for your project, based on the Principal Arterial Intersection Conversion Study)*:

- Proposed at-grade project that reduces delay at a High Priority Intersection: ☐ (100 Points)
- Proposed at-grade project that reduces delay at a Medium Priority Intersection: ☐ (90 Points)
- Proposed at-grade project that reduces delay at a Low Priority Intersection: ☐ (80 Points)
- Not listed as a priority in the study: ☐ (0 Points)

### Congestion Management Safety Plan IV:

The measure relies on the results on MnDOT's Congestion Management Safety Plan IV (CMSP IV), which prioritized lower cost/high benefit, spot mobility projects on MnDOT-owned roadways. For the Regional Solicitation, only the CMSP opportunity areas on the A-minor arterial or non-freeway principal arterial systems are eligible. Principal arterial projects on the freeway system are not eligible for funding per TAB-adopted rules.

Use the final list of *CMSP IV opportunity area locations* as depicted in the 2040 Transportation Policy Plan (2018).

**RESPONSE** (Select one for your project):

- Proposed at-grade project that reduces delay at a CMSP opportunity area: ☐ (100 Points)
- Not listed as a CMSP priority location: ☐ (0 Points)

**SCORING GUIDANCE** (100 Points)

Due to the four scoring methods, more than one project can score the maximum points. In order to be awarded points for this measure the proposed project itself must show some delay reduction in measure 3A. If the project does not reduce delay, then it will score 0 points for this measure.

Congestion within Project Area: The applicant with the most congestion within the project area (measured by the largest percentage decrease in peak hour travel speeds relative to free-flow conditions) will receive the full points. Remaining projects will receive a proportionate share of the full points. For example, if the application being scored showed a 5% decrease of travel speeds in the peak hour relative to free flow conditions and the top project had a 10% reduction, this applicant would receive (5/10)*100 points, or 50 points. If the project covers more than one segment of speed data, the applicants can use the one that is most beneficial to their score.

Congestion on adjacent Parallel Routes: The applicant with the most congestion on an adjacent parallel route (measured by the largest percentage decrease in peak hour travel speeds relative to free-flow

conditions) will receive the full points. Remaining projects will receive a proportionate share of the full points. For example, if the application being scored showed a 5% decrease of travel speeds in the peak hour on the adjacent parallel route relative to free flow conditions and the top project had a 10% reduction, this applicant would receive (5/10)*100 points, or 50 points. Applicants can use the adjacent parallel route that is most beneficial to their score.

Principal Arterial Intersection Conversion Study: Projects will be scored based on their Principal Arterial Intersection Conversion Study priorities.

Congestion Management and Safety Plan IV: Projects will be scored based on whether their project location is in a Congestion Management and Safety Plan opportunity area.

The scorer will assess if the applicant would score highest with congestion on adjacent parallel routes part of the measure, the Principal Arterial Intersection Conversion Study part of the measure, or the CMSP IV part of the measure and give the applicant the highest of the four scores out of a maximum of 1000 points.

Note: Due to the use of multiple sub-sections, multiple applicants may receive the full 100 points.

B. **MEASURE**: This criterion relies on the results on the Truck Highway Corridor Study, which prioritized all principal and minor arterials based on truck volume, truck percentage of total traffic, proximity to freight industry clusters, and proximity to regional freight terminals. The truck corridors were grouped into tiers 1, 2, and 3, in order of priority. Use the 2021 Updated Regional Truck Corridors tiers to respond to this measure: *2021 Updated Regional Truck Corridors.* (75 points)

~~Use the final study report for this measure~~

**RESPONSE**: (Select one for your project, based on the updated 2021 Regional Truck Corridors ~~Study~~):

- Along Tier 1: ☐ Miles (to the nearest 0.1 miles): _____
- Along Tier 2: ☐ Miles (to the nearest 0.1 miles): _____
- Along Tier 3: ☐ Miles (to the nearest 0.1 miles) _____
- The project provides a direct and immediate connection (i.e., intersects) with either a Tier 1, Tier 2, or Tier 3 corridor: ☐
- None of the tiers: ☐

**SCORING GUIDANCE** (75 Points)

Applicants will be awarded points as assigned in the above tiers:

- Projects along Tier 1: 75 points
- Projects along Tier 2: 65 points
- Projects along Tier 3: 55 points
- Projects that that provide a direct and immediate connection to a corridor: 10 points.
- None of the tiers: 0 points

If no applicant is along Tier 1, the top-scoring application(s) will be adjusted to 75 points, with the others

adjusted proportionately.

Note: Due to the use of tiered scoring, multiple applications can receive the full points.

## *2. Equity and Housing Performance (100 Points)*

This criterion addresses the *Council's role in advancing equity* by examining how a project directly provides benefits to, or impacts (positive and negative) low-income populations, people of color, people with disabilities, youth and ~~the elderly~~older adults. The criterion evaluates whether the applicant engaged these populations to identify transportation needs and potential solutions and how the project will address these identified needs. The criterion also evaluates a community's overall efforts to implement affordable housing and how the project improves multimodal access to affordable housing residents.

A. **MEASURE**: Socio-Economic Equity

1. **Sub-measure**: Equity Population Engagement (0 to 20 points): A successful project is one that is the result of active engagement of low-income populations, people of color, persons with disabilities, youth and ~~the elderly~~older adults. Engagement should occur prior to and during a project's development, with the intent to provide direct benefits to, or solve, an expressed transportation issue, while also limiting and mitigating any negative impacts. Describe and map the location of any low-income populations, people of color, disabled populations, youth or ~~the elderly~~older adults within a ½ mile of the proposed project. Describe how these specific populations were engaged ~~and provided outreach to~~, whether through community planning efforts, project needs identification, or during the project development process. Describe what engagement methods and tools were used and how the input from these groups is reflected in the project's~~'~~ purpose and need and design. Elements of quality engagement include: outreach and engagement to specific communities and populations that are likely to be directly impacted by the project; techniques to reach out to populations traditionally not involved in community engagement related to transportation projects; feedback from these populations identifying potential positive and negative elements of the proposed project through engagement, study recommendations, or plans that provide feedback from populations that may be impacted by the proposed project. If relevant, describe how NEPA or Title VI regulations will guide engagement activities.

(Limit 1,400 characters; approximately 200 words):

2. **Sub-measure:** Equity Population Benefits and Impacts (0 to 30 points): A successful project is one that has been designed to provide direct benefits to low-income populations, people of color, persons with disabilities, youth and ~~the elderly~~older adults. All projects must mitigate potential negative benefits as required under federal law. Projects that are designed to provide benefits go beyond the mitigation requirement to proactively provide transportation benefits and solve transportation issues experienced by Equity populations.

   a. (0 to 30 points) Describe the project's benefits to low-income populations, people of color, children, people with disabilities, and ~~the elderly~~older adults. Benefits could relate to pedestrian and bicycle safety improvements; public health benefits; direct access improvements for residents or improved access to destinations such as jobs, school, health care or other; travel time improvements; gap closures; new transportation services or modal

options, leveraging of other beneficial projects and investments; and/or community connection and cohesion improvements. Note that this is not an exhaustive list.

(Limit 2,800 characters; approximately 400 words):

b. (-10 to 0 points) Describe any negative impacts to low-income populations, people of color, children, people with disabilities, and ~~the elderly~~older adults created by the project, along with measures that will be taken to mitigate them. Negative impacts that are not adequately mitigated can result in a reduction in points.

(Limit 2,800 characters; approximately 400 words):

Below is a list of negative impacts. Note that this is not an exhaustive list.

- Increased difficulty in street crossing caused by increased roadway width, increased traffic speed, wider turning radii, or other elements that negatively impact pedestrian access.
- Increased noise.
- Decreased pedestrian access through sidewalk removal / narrowing, placement of barriers along the walking path, increase in auto-oriented curb cuts, etc.
- Project elements that are detrimental to location-based air quality by increasing stop/start activity at intersections, creating vehicle idling areas, directing an increased number of vehicles to a particular point, etc.
- Increased speed and/or "cut-through" traffic.
- Removed or diminished safe bicycle access.
- Inclusion of some other barrier to access to jobs and other destinations.
- Displacement of residents and businesses.
- Mitigation of temporary construction/implementation impacts such as dust; noise; reduced access for travelers and to businesses; disruption of utilities; and eliminated street crossings.
- Other

3. **Sub-measure: Bonus Points (0 to 25 points)** Those projects that score at least 80% of the maximum total points available through sub-measures 1 and 2 will be awarded bonus points based on the geographic location of the project. These points will be assigned as follows, based on the highest-scoring geography the project contacts:
   ~~a. 25 points to projects within an Area of Concentrated Poverty with 50% or more people of color~~
   ~~b.~~a. ~~20~~ 25 points to projects within an Area of Concentrated Poverty
   ~~c.~~b. ~~15~~ 20 points to projects within census tracts with the percent of population in poverty or population of color above the regional average percent
   ~~d.~~c. 10 points for all other areas

   Upload the "Socio-Economic Conditions" map used for this measure.

**RESPONSE** (Select one, based on the "Socio-Economic Conditions" map):

- ~~Project is located in an Area of Concentrated Poverty where 50% or more of residents are people of color (ACP50): ☐~~
- Project is located in an Area of Concentrated Poverty: ☐
- Project's census tracts are above the regional average for population in poverty or population of color: ☐
- Project located in a census tract that is below the regional average for population in poverty or populations of color~~, or includes children, people with disabilities, or the elderly~~: ☐

**SCORING GUIDANCE** (50 Points)

Each application will be qualitatively scored based on the available points for each measure and will receive the number of points awarded. If the applicant receives at least 80% of the available points, i.e., 40 points for the Roadway applications, the project will receive Bonus points as described under sub-measure 3. If an applicant qualifies for Bonus points it will result in a Socio-Economic Equity score of more than the total points available.

B. **MEASURE**: Projects will be scored based on two housing measures: 1. the 2019 Housing Performance Score for the city or township in which the project is located (40 points) and 2. the project's connection to affordable housing (10 points) as described below.

**Part 1 (40 points): Housing Performance Score**

A city or township's housing performance score is calculated annually by the Metropolitan Council using data from four categories: new affordable or mixed-income housing completed in the last ten years; preservation projects completed in the last seven years and/or substantial rehabilitation projects completed in the last three years; housing program participation and production, and housing policies and ordinances; and characteristics of the existing housing stock. Data for the housing performance scores are updated each year by the Council, and the city or township is provided with an opportunity to review and revise the information

Council staff will use the most current housing score for each city or township. If the project is located in more than one jurisdiction, the points will be awarded based on a weighted average using length or population of the project in each jurisdiction. For stand-alone intersection, bridge, underpass, and interchange projects, a one-mile radius-buffer will be drawn around the project. If the radius-buffer enters more than one jurisdiction, the points will be awarded based on the proportionate population of the Census blocks in each jurisdiction that are all or partially located in the area within the one-mile radius-buffer. If a project is located in a city or township with no allocation of affordable housing need (either there is no forecasted household growth or the area does not have land to support sewered development), the project will not be disadvantaged by this measure and the project's total score will be adjusted during scoring to remove this scoring measure.

**RESPONSE**: (NOTE: The below bullets vary slightly by funding category)

- City/Township: _____
- Total project cost: _____
- Length of Segment (For stand-alone projects, enter population from Regional Economy map) within each City/Township: _____

- Percent of total funds to be spent within City/Township: _____

**Part 2 (10 points): Affordable Housing Access**

This measure is a qualitative scoring measure. Describe and map any affordable housing developments— planned, under construction or existing, within ½ mile of the proposed project. The applicant should note the development stage, number of units, number of bedrooms per unit, and level of affordability using 2019 affordability limits. Also note whether the affordability is guaranteed through funding restrictions (i.e. LIHTC, 4d) or is unsubsidized, if housing choice vouchers are/will be accepted, and if there is a fair housing marketing plan required or in place.

Describe how the proposed project will improve or impact access for residents of the affordable housing locations within ½ mile of the project. This should include a description of improved access by all modes, automobiles, transit, bicycle and pedestrian access. Since residents of affordable housing are more likely not to own a private vehicle, higher points will be provided to roadway projects that include other multimodal access improvements.

**RESPONSE**:

(Limit 2,100 characters; approximately 300 words):

**SCORING GUIDANCE** (50 Points)

Part 1 (40 points): The applicant with the highest 2019 Housing Performance Score will receive the full points. Remaining projects will receive a proportionate share of the full points. For example, if the application being scored had a Housing Performance Score of 55 and the top project had a Housing Performance Score of 90, this applicant would receive (55/90)*40 points or 24 points.

Projects will use the city Housing Performance Score based on the project location. If a project is located in more than one jurisdiction, the points will be awarded based on a weighted average of the city or township scores for the project location based on the length of the project in each jurisdiction. For stand-alone roadway (intersection, bridge, underpass, and interchange) projects, a one-mile radius-buffer will be drawn around the project. If the radius-buffer enters more than one jurisdiction, the points will be awarded based on the proportionate population of the Census blocks in each jurisdiction that are all or partially located in the area within the one-mile radius-buffer.

If a project is located in a city or township with no allocation of affordable housing need (either there is no forecasted household growth or the area does not have land to support sewered development), the project's total score will be adjusted as a result. If this is the case, the hold-harmless method will be used: the total points possible in the application will be 960 instead of 1,000. The total points awarded through the rest of the application (900 as a hypothetical example) will be divided by 960, then multiplied by 1,000. Therefore, a project scoring 900 out of 960, will equate to 938 points on a 1,000-point scale. If a portion of the project is located in a city with an affordable housing allocation and the other portion is located in a township with no affordable housing allocation, then a combination of the Housing Performance Score (or weighted average) and the hold-harmless method should be used. This will result in a total score that will be somewhere between 960 and 1,000; then the score will need to be adjusted to fit a 1,000-point scale. NOTE: Any community without a Housing Performance Score in 2018 will be awarded the better of its new score in 2020 and the above method. NOTE: in these cases, the raw points from Part 2 will be included in the 960-point total.

Part 2 (10 points): The project that best provides meaningful improvements to access to the affordable

housing units will receive the full 10 points. Multiple projects may receive the highest possible score of 10 points based on this assessment. Remaining projects will receive a share of the full points at the scorer's discretion.

Final Score (50 points): The scores in Parts 1 and 2 will be totaled. If no application gets 50 points, the highest-scoring project will be awarded 50 points, with other projects adjusted proportionately.

Note: Metropolitan Council staff will score this measure.

### *3. Congestion Reduction/Air Quality (~~275~~ 190 Points)*

Commented [PS1]: Points may shift depending on committee feedback.

This criterion measures the project's ability to reduce intersection delay and emissions during peak hour conditions. In addition, it will address its ability to improve congested intersections operating at unacceptable levels of service during peak hour conditions.

A. **MEASURE**: Conduct a capacity analysis at one or more of the intersections being improved by the roadway project using existing turning movement counts (collected within the last three years) in the weekday a.m. or p.m. peak hour and Synchro or HCM software. The analysis must include build and no build conditions (with and without the project improvements). The applicant must show the current total peak hour delay at one or more intersections and the reduction in total peak hour intersection delay at these intersections in seconds, due to the project. If more than one intersection is examined, then the delay reduced by each intersection can be can added together to determine the total delay reduced by the project.

   The applicant should include the appropriate Synchro or HCM full reports (including the Timing Page Report) that support the improvement in total peak hour delay and should conduct the analysis using the following:

   - Under the network settings, all defaults should be used for lanes, saturation flow rates, volumes, and simulation
   - Use Synchro's automatic optimization to determine cycle, offset and splits (for traffic signals). Use the setting when assessing delay both with and without the project. This methodology will ensure that all applicants start with their signal systems optimized when determining existing delay.
   - Project improvements assumed in the build condition should be reflected in the total project cost, such as additional through or turn lanes and protective left-turn phasing
   - Roadway lengths for intersection approaches must be the same length for before and after scenarios
   - An average weekday should be used for the existing conditions instead of a weekend, peak holiday, or special event time period that is not representative of the corridor for most of the year
   - For most projects, the volumes with and without the project should be the same; however, some project types such as new roadways, new ramps, or new interchanges may have different volumes.

   Total Peak Hour Delay Reduced (Seconds) = Total Peak Hour Delay Per Vehicle x Vehicles Per Hour

   **RESPONSE**:

   - Total Peak Hour Delay/Vehicle without the Project (Seconds/Vehicle):_____
   - Total Peak Hour Delay/Vehicle with the Project (Seconds/Vehicle):_____

- Total Peak Hour Delay/Vehicle Reduced by the Project (Seconds/Vehicle):_____ (automatically calculated)
- Volume without the Project (Vehicles Per Hour): _____
- Volume with the Project (Vehicles Per Hour): _____
- Total Peak Hour Delay Reduced by the Project (Seconds): _____ (automatically calculated)

**EXPLANATION** of date of last signal retiming for signalized corridors (Limit 1,400 characters; approximately 200 words):

Upload Synchro or HCM Report

**SCORING GUIDANCE** (~~200~~ 140 Points)

The applicant with the most peak hour vehicle delay reduced by the project improvement will receive the full points for the measure. Remaining projects will receive a proportionate share of the points. For example, if the application being scored reduced delay by 5,000 seconds and the top project reduced delay by 25,000 seconds, this applicant would receive (5,000/25,000)*~~200~~ 140 points, or ~~40~~ 28 points.

B. **MEASURE**: Using the Synchro or HCM analysis completed in the previous measure, identify the total peak hour emissions reduction in kilograms (CO, NOX, VOC) due to the project. The applicant should include the appropriate Synchro or HCM reports (including the Timing Page Report) that support the improvement in total peak hour emissions. If more than one intersection is examined, then the emissions reduced by each intersection can be can added together to determine the total emissions reduced by the project.

- Total Peak Hour Emissions Reduced (Kilograms) = Total Peak Hour Emissions without the project – Total Peak Hour Emissions with the Project

**RESPONSE** (Calculation):

- Total (CO, NOX, and VOC) Peak Hour Emissions without the Project (Kilograms):_____
- Total (CO, NOX, and VOC) Peak Hour Emissions with the Project (Kilograms):_____
- Total (CO, NOX, and VOC) Peak Hour Emissions Reduced by the Project (Kilograms):_____

**EXPLANATION** of methodology and assumptions used (Limit 1,400 characters; approximately 200 words):

**SCORING GUIDANCE** (~~75~~ 50 Points)

The applicant with the most kilograms reduced by the project improvement will receive the full points for the measure. Remaining projects will receive a proportionate share of the full. For example, if the application being scored reduced emissions by 3 kilograms and the top project reduced emissions by 5 kilograms, this applicant would receive (3/5)*~~75~~ 50 points or ~~45~~ 30 points.

## *4. Safety (~~275~~ 360 Points)*

This criterion addresses the project's ability to correct deficiencies and improve the overall safety of an existing roadway facility. It will assess the project's monetized safety benefits.

**Commented [PS2]:** Points may shift depending on committee feedback.

A. **MEASURE**: Calculate the reduction in the total number of crashes due to improvements on the A-minor arterial or non-freeway principal arterial made by the project. The applicant must base the estimate of crash reduction on the methodology consistent with the latest Highway Safety Improvement Program (HSIP) application (*www.dot.state.mn.us/stateaid/trafficsafety.html*). Applicants should focus on the crash analysis for reactive projects.

Crash data must be obtained for the project length using the MnDOT TIS system average for calendar years 2016 through 2018. Crash data should include all crash types and severities, including pedestrian and bicycle crashes.

Applicants should request crash data from MnDOT as early as possible. The applicant must then attach a listing of the crashes reduced and the HSIP Benefit/Cost (B/C) worksheet (www.dot.state.mn.us/stateaid/trafficsafety.html) that identifies the resulting benefit associated with the project. As part of the response, please detail and attach the crash modification factor(s) used from FHWA's Crash Modification Factors Clearinghouse: *http://www.cmfclearinghouse.org/*. As part of the Regional Solicitation Before & After Study, Phase 2 (2021), a list of commonly used crash modification factors was created. Applicants have the option to use these crash modification factors (posted on the Metropolitan Council's Regional Solicitation website, under Application Resources) or find a more appropriate one on FHWA's Clearinghouse.

**Commented [PS3]:** New text

This measure requests the monetized safety benefit of the project. The cost of the project is scored in the Cost Effectiveness criterion.

**RESPONSE**:

- Crash Modification Factors Used (Limit 700 characters; approximately 100 words): _____
- Rationale for Crash Modifications Selected (Limit 1,400 characters; approximately 200 words): _____
- Project Benefit ($) from B/C ratio: _____
- Total Fatal (K) Crashes: _____
- Total Serious Injury (A) Crashes: _____
- Total Non-Motorized Fatal and Serious Injury Crashes: _____
- Total Crashes: _____
- Total Fatal (K) Crashes Reduced by Project: _____
- Total Serious Injury (A) Crashes Reduced by Project: _____
- Total Non-Motorized Fatal and Serious Injury Crashes Reduced by Project: _____
- Total Crashes Reduced by Project: _____

Upload Crash Modification Factors and B/C Worksheet.

**SCORING GUIDANCE** (~~225~~ 310 Points)

The applicant with the highest dollar value of benefits will receive the full points for the measure. Remaining projects will receive a proportionate share of the full points. For example, if the application being scored had safety benefits of $11,000,000 and the top project had safety benefits of $16,000,000, this applicant would receive (11,000,000/16,000,000)*~~225~~ 310 points or ~~155~~ 213 points.

B. **MEASURE**: Discuss how the project will improve safety for pedestrians. Safety countermeasures for pedestrians can include those identified by the FHWA as part of its *Safe Transportation for Every Pedestrian program* or others in its *Proven Safety Countermeasures* (e.g., pedestrian refuge islands, raised crosswalks, pedestrian hybrid beacons, leading pedestrian intervals). More information about pedestrian safety best practices is also available in MnDOT's *Best Practices for Pedestrian/Bicycle Safety*

**SCORING GUIDANCE** (50 Points)

The project that will provide the most improvement to pedestrian safety will receive full points. Remaining projects will receive a share of the full points at the scorer's discretion.

**Commented [PS4]:** See information item for proposed new text, which would replace this content.

## *5. Multimodal Elements and Existing Connections (100 Points)*

This criterion measures how the project improves the travel experience, safety, and security for other modes of transportation and addresses the safe integration of these modes. The Transportation Policy Plan requires that explicit consideration of all users of the transportation system be considered in the planning and scoping phase of roadway projects.

A. **MEASURE**: Describe how the project positively affects the multimodal system.

- Discuss any bicycle, pedestrian, or transit elements that are included as part of the project and how they improve the travel experience, safety, and security for users of these modes. Applicants should make sure that new multimodal elements described in the response are accounted for as part of the cost estimate form earlier in the application. Applicants should note if there is no transit service in the project area and identify supporting studies or plans that address why a mode may not be incorporated in the project (e.g., a bicycle system plan that locates bikeway facilities on a lower-volume parallel route).
- Describe how the proposed multimodal improvements positively affect identified alignments in the Regional Bicycle Transportation Network (RBTN) or along a regional trail, if applicable.
- Describe how the proposed multimodal improvements either provide a new, or improve an existing Major River Bicycle Barrier Crossing (MRBBC) as defined in the 2040 Transportation Policy Plan (TPP) or how they provide a new or improved crossing of a Regional Bicycle Barrier with respect to the tiered Regional Bicycle Barrier Crossing Improvement Areas as defined in the TPP and Technical Addendum to the Regional Bicycle Barriers Study (May 2019), if applicable.
- Discuss the existing bicycle, pedestrian, and transit connections and how the project enhances these connections.
- Discuss whether the project implements specific locations identified as being deficient in a completed ADA Transition Plan.

**RESPONSE** (Limit 2, 800 characters; approximately 400 words):

**SCORING GUIDANCE** (100 Points)

The project that most positively affects the multimodal system will receive the full points. Remaining projects will receive a share of the full points at the scorer's discretion. The project score will be based on the quality of the improvements, as opposed to being based solely on the number of modes addressed. Points can be earned for incorporating multimodal project elements, positively affecting identified alignments in the Regional Bicycle Transportation Network (RBTN), regional trail, Major River Bicycle Barrier Crossing, or Regional Bicycle Barrier, for making connections with existing multimodal systems, or helping to implement an ADA Transition Plan. Projects do not need all of these elements to be awarded all of the points. Multimodal elements for rural roadway projects may include wider shoulders that will be used by bicyclists and pedestrians.

## *6. Risk Assessment (75 Points)*

This criterion measures the number of risks associated with successfully building the project. High-risk applications increase the likelihood that projects will withdraw at a later date. If this happens, the region is forced to reallocate the federal funds in a short amount of time or return them to the US Department of Transportation. These risks are outlined in the checklist in the required Risk Assessment.

A. **MEASURE**: Applications involving construction must complete the Risk Assessment. This checklist includes activities completed to-date, as well as an assessment of risks (e.g., right-of-way acquisition, proximity to historic properties, etc.).

**RESPONSE** (Complete Risk Assessment):

Please check those that apply and fill in anticipated completion dates for all projects~~,~~ ~~except for n~~New/expanded transit service projects will receive full credit for items 2-5 but must fill out item 1. ~~or t~~Transit vehicle purchases will receive full credit.

**1. Public Involvement (20 Percent of Points)**

Projects that have been through a public process with residents and other interested public entities are more likely than others to be successful. The project applicant must indicate that events and/or targeted outreach (e.g., surveys and other web-based input) were held to help identify the transportation problem, how the potential solution was selected instead of other options, and the public involvement completed to date on the project. The focus of this section is on the *opportunity for public input* as opposed to the quality of input. NOTE: A written response is required and failure to respond will result in zero points.

~~List Dates of most recent meetings and outreach specific to this project:~~

- ~~Meeting with general public: _____~~
- ~~Meeting with partner agencies: _____~~
- ~~Targeted online/mail outreach: _____~~
  - ~~Number of respondents: _____~~

100% ☐ Multiple types of targeted outreach efforts (such as meetings or online/mail outreach)~~Meetings~~ specific to this project with the general public and partner agencies have been used to help identify the project need.

~~75% ☐ Targeted outreach specific to this project with the general public and partner agencies have been used to help identify the project need.~~

50% ☐ At least one meeting specific to this project with the general public has been used to help identify the project need.

50% ☐ At least ~~one meeting~~ online/mail outreach effort specific to this project with the general public ~~key partner agencies~~ has been used to help identify the project need.

25% ☐ No meeting or outreach specific to the project was conducted, but the project was identified through meetings and/or outreach related to a larger planning effort.

0% ☐ No outreach has led to the selection of this project.

**RESPONSE** (Limit 2,800 characters; approximately 400 words). Describe the type(s) of outreach selected for this project (i.e., online or in-person meetings, surveys, demonstration projects), the method(s) used to announce outreach opportunities, and how many people participated. Include any public website links to outreach opportunities.~~:~~

2. **Layout (25 Percent of Points)**
   Layout ~~should~~ includes proposed geometrics and existing and proposed right-of-way boundaries. A basic layout should include a base map (north arrow; scale; legend;* city and/or county limits; existing ROW, labeled; existing signals;* and bridge numbers*) and design data (proposed alignments; bike and/or roadway lane widths; shoulder width;* proposed signals;* and proposed ROW). An aerial photograph with a line showing the project's termini does not suffice and will be awarded zero points.

   *If applicable

   100% ☐ Layout approved by the applicant and all impacted jurisdictions (i.e., cities/counties/MnDOT ~~that the project goes through or agencies that maintain the roadway(s)~~). If a MnDOT trunk highway is impacted, approval by MnDOT must have occurred to receive full points.~~-~~ **A PDF of the layout must be attached along with letters from each jurisdiction to receive points.**

   100% ☐ A layout does not apply (signal replacement/signal timing, stand-alone streetscaping, minor intersection improvements). Applicants that are not certain whether a layout is required should contact Colleen Brown at MnDOT Metro State Aid – colleen.brown@state.mn.us.

   50% ☐ Layout completed but not approved by all jurisdictions. **A PDF of the layout must be attached to receive points.**

   25% ☐ Layout has been started but is not complete. **A PDF of the layout must be attached to receive points.**

   0% ☐ Layout has not been started

~~3. Anticipated date or date of completion: _____~~

**~~4.~~3. Review of Section 106 Historic Resources (15 Percent of Points)**

100% ☐ No known historic properties eligible for or listed in the National Register of Historic Places are located in the project area, and project is not located on an identified historic bridge

100% ☐ There are historical/archeological properties present but determination of "no historic properties affected" is anticipated.

80% ☐ Historic/archeological property impacted; determination of "no adverse effect" anticipated

40% ☐ Historic/archeological property impacted; determination of "adverse effect" anticipated

0% ☐ Unsure if there are any historic/archaeological properties in the project area.

Project is located on an identified historic bridge: ☐

**~~5.~~4. Right-of-Way (25 Percent of Points)**

100% ☐ Right-of-way, permanent or temporary easements, and MnDOT agreement/limited-use permit either not required or all have been acquired

50% ☐ Right-of-way, permanent or temporary easements, and/or MnDOT agreement/limited-use permit required~~,~~ - plat, legal descriptions, or official map complete

25% ☐ Right-of-way, permanent or temporary easements, and/or MnDOT agreement/limited-use permit required~~,~~ - parcels identified

0% ☐ Right-of-way, permanent or temporary easements, and/or MnDOT agreement/limited-use permit required~~,~~ – parcels not all identified

~~Anticipated date or date of acquisition _____~~

**~~6.~~5. Railroad Involvement (15 Percent of Points)**

100% ☐ No railroad involvement on project or railroad Right-of-Way agreement is executed (include signature page, if applicable)

50% ☐ Railroad Right-of-Way Agreement required; negotiations have begun

0% ☐ Railroad Right-of-Way Agreement required; negotiations have not begun.

Anticipated date or date of executed Agreement _____

**SCORING GUIDANCE** (75 Points)

The applicant with the most points on the Risk Assessment (more points equate to less project risk) will receive the full points for the measure. Remaining projects will receive a proportionate share of the full points. For example, if the application being scored had 40 points and the top project had 70 points, this applicant would receive (40/70)*75 points or 43 points.

## *7. Cost Effectiveness (100 Points)*

This criterion will assess the project's cost effectiveness based on the total TAB-eligible project cost (not including noise walls) and total points awarded in the previous 8 criteria. If a project has been awarded other outside, competitive funding (e.g., state bonding, Transportation Economic Development Program, Minnesota Highway Freight Program), project sponsors may reduce the total project cost for the purposes of this scoring measure by the amount of the outside funding award.

A. **MEASURE**: This measure will calculate the cost effectiveness of the project. Metropolitan Council staff will divide the number of points awarded in the previous criteria by the TAB-eligible project cost (not including noise walls).

- Cost effectiveness = total number of points awarded in previous criteria/total TAB-eligible project cost (not including noise walls)

**RESPONSE** (This measure will be calculated after the scores for the other measures are tabulated by the Scoring Committee):

- Total Project Cost (entered in Project Cost Form):_____ (automatically calculated)
- Enter amount of Noise Walls: _____
- Enter amount of any outside, competitive funding (attach documentation of award): _____
- Points Awarded in Previous Criteria: ____ (entered by Metropolitan Council staff)

**SCORING GUIDANCE** (100 Points)

The applicant with the most points (i.e., the benefits) per dollar will receive the full points for the measure. Remaining projects will receive a proportionate share of the full points. For example, if the top project received .0005 points per dollar and the application being scored received .00025 points per dollar, this applicant would receive (.00025/.0005)*100 points or 50 points.

The scorer for this measure will also complete a reasonableness check of the total project cost that is used for this measure. The scorer may follow up with the applicant to clarify any questions. Up to 50 percent of points awarded for this measure can be deducted if the scorer does not believe that the cost estimate is reasonable.

**TOTAL: 1,100 POINTS**

# Strategic Capacity (Roadway Expansion)

**Prioritizing Criteria and Measures**

**September 15, 2021**

**Definition:** A roadway project that adds thru-lane capacity (described as a Regional Mobility project under Strategic Capacity Enhancements in the TPP). Projects must be located on a non-freeway principal arterial or A-minor arterial functionally classified roadway, consistent with the latest TAB approved functional classification map. However, A-minor connectors cannot be expanded with new thru-lane capacity with these federal funds per regional policy.

## Examples of Roadway Expansion Projects:

- New roadways
- Two-lane to four-lane expansions
- Other thru-lane expansions (excludes additions of a continuous center turn lane)
- Four-lane to six-lane expansions
- New interchanges with or without associated frontage roads
- Expanded interchanges with either new ramp movements or added thru lanes
- New bridges, overpasses and underpasses

## Scoring:

| Criteria and Measures | Points | % of Total Points |
|---|---|---|
| **1. Role in the Regional Transportation System and Economy** | **210** | **19%** |
| Measure A - Congestion within Project Area, Level of Adjacent Congestion, or Principal Arterial Intersection Conversion Study Priorities | 80 | |
| Measure B - Connection to Total Jobs, Manufacturing/Distribution Jobs, and Students | 50 | |
| Measure C - Regional Truck Corridor Study Tiers | 80 | |
| **2. Usage** | **175** | **16%** |
| Measure A - Current daily person throughput | 110 | |
| Measure B - Forecast 2040 average daily traffic volume | 65 | |
| **3. Equity and Housing Performance** | **100** | **9%** |
| Measure A - Benefits and outreach to disadvantaged populations | 50 | |
| Measure B - Housing Performance Score/ affordable housing connection | 50 | |
| **4. Infrastructure Age** | **40** | **4%** |
| Measure A - Date of construction | 40 | |
| **5. Congestion Reduction/Air Quality** | **150** | **14%** |
| Measure A - Vehicle delay reduced | 100 | |
| Measure B - Kg of emissions reduced | 50 | |
| **6. Safety** | **150** | **14%** |
| Measure A - Crashes reduced | 120 | |
| Measure B - Pedestrian Crash Reduction (Proactive) | 30 | |

| Criteria and Measures | Points | % of Total Points |
|---|---|---|
| **7. Multimodal Elements and Existing Connections** | **110** | **10%** |
| Measure A - Transit, bicycle, or pedestrian project elements and connections | 110 | |
| **8. Risk Assessment** | **75** | **7%** |
| Measure A – Risk Assessment Form | 75 | |
| **9. Cost Effectiveness** | **100** | **9%** |
| Measure A – Cost effectiveness (total points awarded/total project cost) | 100 | |
| **Total** | **1,100** | |

## *1. Role in the Regional Transportation System and Economy (210 Points)*

Tying regional policy (Thrive MSP2040) to the Regional Solicitation, this criterion measures the project's ability to serve a transportation purpose within the regional transportation system and economy based on congestion in the project area, congestion levels along the regional transportation system near the project, how it aligns with the Principal Arterial Intersection Conversion Study, how it connects to employment, manufacturing/distribution-related employment, and students, and how it aligns with the Regional Truck Corridor Study.

A. **MEASURE**: Identify the level of congestion within the project area. This measure uses speed data as was used as part of the Congestion Management Process (CMP) Plan. It is anticipated that the CMP Plan will be further incorporated into the Regional Solicitation as part of the 2022 Regional Solicitation funding cycle. Also, identify the level of congestion on a parallel route and how the project area is prioritized in the Principal Arterial Intersection Conversion Study. Respond to each of the three sub-sections below. Projects will get the highest score of the three sub-sections.

### Congestion within Project Area:

The measure will analyze the level of congestion within the project area. Council staff will provide travel speed data on the "Level of Congestion" map. The analysis will compare the peak hour travel speed within the project area to free-flow conditions.

**RESPONSE**:

- Free-Flow Travel Speed: _____
- Peak Hour Travel Speed: _____
- Percentage Decrease in Travel Speed in Peak Hour compared to Free-Flow (calculation): _____

Upload the "Level of Congestion" map used for this measure.

### Congestion on adjacent Parallel Routes:

The measure will analyze the level of congestion on an adjacent parallel A-minor arterial or principal arterial to determine the importance of the roadway in managing congestion on the Regional Highway System. Council staff will provide travel speed data on an applicant-selected adjacent parallel route that is adjacent to the proposed project on the "Level of Congestion" map. The analysis will compare the peak hour travel speed on an adjacent parallel route to free-flow conditions on this same route to understand congestion levels in the area of the

project, which correlates to the role that the project plays in the regional transportation system and economy. The applicant must identify the adjacent parallel corridor as part of the response. The end points of this adjacent parallel corridor must align as closely as possible to the project end points.

**RESPONSE**:

- Adjacent Parallel Corridor: _____
- Adjacent Parallel Corridor Start and End Points: _____
- Free-Flow Travel Speed): _____
- Peak Hour Travel Speed: _____
- Percentage Decrease in Travel Speed in Peak Hour Compared to Free-Flow (calculation): _____

Upload the "Level of Congestion" map used for this measure.

### Principal Arterial Intersection Conversion Study:

The measure relies on the results of the Principal Arterial Intersection Conversion Study, which prioritized non-freeway principal arterial intersections. In addition to interchange projects, other lane expansion projects that make improvements to a low-, medium-, or high-priority intersection can also earn points in this measure.

Use the final study report for this measure: *metrocouncil.org/PAICS*

**RESPONSE** (Select one for your project, based on the Principal Arterial Intersection Conversion Study):

- Proposed interchange or at-grade project that reduces delay at a High Priority Intersection: ☐ (80 Points)
- Proposed at-grade project that reduces delay at a Medium Priority Intersection: ☐ (60 Points)
- Proposed at-grade project that reduces delay at a Low Priority Intersection: ☐ (50 Points)
- Proposed interchange project that reduces delay at a Medium Priority Intersection: ☐ (40 Points)
- Proposed interchange project that reduces delay at a Low Priority Intersection: ☐ (0 Points)
- Not listed as a priority in the study: ☐ (0 Points)

**SCORING GUIDANCE** (80 Points)

Due to the three scoring methods, more than one project can score the maximum points. In order to be awarded points for this measure the proposed project itself must show some delay reduction in measure 5A. If the project does not reduce delay, then it will score 0 points for this measure.

Congestion within Project Area: The applicant with the most congestion within the project area (measured by the largest percentage decrease in peak hour travel speeds relative to free-flow conditions) will receive the full points. Remaining projects will receive a proportionate share of the full points. For example, if the application being scored showed a 5% decrease of travel speeds in the peak hour relative to free flow conditions and the top project had a 10% reduction, this applicant would receive (5/10)*80 points, or 40 points. If the project covers more than one segment of speed data, the

applicants can use the one that is most beneficial to their score.

Congestion on adjacent Parallel Routes: The applicant with the most congestion on an adjacent parallel route (measured by the largest percentage decrease in peak hour travel speeds relative to free-flow conditions) will receive the full points. Remaining projects will receive a proportionate share of the full points. For example, if the application being scored showed a 5% decrease of travel speeds in the peak hour on the adjacent parallel route relative to free flow conditions and the top project had a 10% reduction, this applicant would receive (5/10)*80 points, or 40 points. Applicants can use the adjacent parallel route that is most beneficial to their score.

Principal Arterial Intersection Conversion Study: Projects will be scored based on their Principal Arterial Intersection Conversion Study priorities.

The scorer will assess if the applicant would score highest with congestion on the adjacent parallel routes part of the measure or the Principal Arterial Intersection Conversion Study part of the measure and give the applicant the highest of the two scores out of a maximum of 80 points. However, all interchange projects must only use the scoring output from the Principal Arterial Intersection Conversion Study.

Note: Due to the use of multiple sub-sections, multiple applicants may receive the full 80 points.

B. **MEASURE**: Reference the "Regional Economy" map generated at the beginning of the application process. Report the existing employment, manufacturing/distribution-related employment, and post-secondary students enrolled within one mile, as depicted on the "Regional Economy" map.

   **RESPONSE** (Data from the "Regional Economy" map):

   - Existing Employment within 1 Mile:_____(Maximum of 50 points)
   - Existing Manufacturing/Distribution-Related Employment within 1 Mile:_____ (Maximum of 50 points)
   - Existing Post-Secondary Students within 1 Mile: _____(Maximum of 30 points)
   - Upload the "Regional Economy" map used for this measure.

**SCORING GUIDANCE** (50 Points)

All Census block groups that are included within or intersect the buffer area around the project will be included.

The applicant with the highest existing total employment will receive the full points. Remaining projects will receive a proportionate share of the full points. For example, if the application being scored had 1,000 workers within one mile and the top project had 1,500 workers, this applicant would receive (1,000/1,500)*50 points or 33 points.

The applicant with the highest existing manufacturing/distribution-related employment will receive the full points. Remaining projects will receive a proportionate share of the full points equal to the existing manufacturing/distribution-related employment within one mile of the project being scored divided by the project with the highest manufacturing/distribution-related employment within one mile multiplied by the maximum points available for the measure. For example, if the application being scored had 1,000 manufacturing/distribution-related workers within one mile and the top project had 1,500

manufacturing/distribution-related workers, this applicant would receive (1,000/1,500)*50 points or 33 points.

The applicant with the highest number of post-secondary students will receive 30 points. Remaining projects will receive a proportionate share of the 30 points. For example, if the application being scored had 1,000 students within one mile and the top project had 1,500 students, this applicant would receive (1,000/1,500)*30 points or 20 points.

The scorer will assess if the applicant would score highest with the total employment part of the measure, the manufacturing/distribution employment part of the measure, or the education part of the measure and give the applicant the highest of the three scores out of a maximum of 50 points.

Note: Due to the use of multiple sub-measures, two applicants can receive the full 50 points.

C. **MEASURE**: This criterion relies on the results on the Truck Highway Corridor Study, which prioritized all principal and minor arterials based on truck volume, truck percentage of total traffic, proximity to freight industry clusters, and proximity to regional freight terminals. The truck corridors were grouped into tiers 1, 2, and 3, in order of priority. Use the 2021 Updated Regional Truck Corridors tiers to respond to this measure: *2021 Updated Regional Truck Corridors.* (80 points)

~~Use the final study report for this measure:~~

**RESPONSE**: (Select one for your project, based on the 2021 updated Regional Truck Corridors ~~Study~~):

- Along Tier 1: ☐ Miles (to the nearest 0.1 miles) :_____
- Along Tier 2: ☐ Miles (to the nearest 0.1 miles) :_____
- Along Tier 3: ☐ Miles (to the nearest 0.1 miles) :_____
- The project provides a direct and immediate connection (i.e., intersects) with either a Tier 1, Tier 2, or Tier 3 corridor: ☐
- None of the tiers: ☐

**SCORING GUIDANCE** (80 Points)

Applicants will be awarded points as assigned in the above tiers:

- Projects along Tier 1: 80 points
- Projects along Tier 2: 60 points
- Projects along Tier 3: 40 points
- Projects that that provide a direct and immediate connection to a corridor: 10 points.
- None of the tiers: 0 points

If no applicant is along Tier 1, the top-scoring application(s) will be adjusted to 80 points, with the others adjusted proportionately.

Note: Due to the use of tiered scoring, multiple applications can receive the full points.

## 2. Usage (175 Points)

This criterion quantifies the project's potential impact by measuring the current daily person throughput and future vehicular traffic that will be served by the project. These roadway users directly benefit from the project improvements on the A-minor arterial or non-freeway principal arterial.

A. **MEASURE**: The applicant must identify the location along the project length and provide the current AADT volume from the *MnDOT Traffic Mapping Application* ~~MnDOT 50-series maps (select Twin Cities Metro Area Street Series under Traffic Volume (AADT))~~ and existing transit routes that travel on the road (reference "Transit Connections" map). Due to the potential timing issues with when a traffic count was taken relative to the COVID-19 pandemic (and resulting drop in traffic volumes), applicants may also use a historic AADT volume from the MnDOT Traffic Mapping Application (instructions under the Help Document). Ridership data will be provided by the Metropolitan Council staff, if public transit is currently provided on the project length. Metropolitan Council staff will calculate the current daily person throughput at one location along the A-minor arterial or non-freeway principal arterial project length using the current average annual daily traffic (AADT) volume and average annual ridership.

- Current Daily Person Throughput = (current average annual daily traffic volume x 1.30 vehicle occupancy) + average annual daily transit ridership (2019)
- For new roadways, identify the estimated existing daily traffic volume based on traffic modeling.

**RESPONSE**:

- Location:_____
- Current AADT volume:_____
- Existing Transit Routes on the Project:_____

  Transit routes that will likely be diverted to the new proposed roadway (if applicable):_____Upload "Transit Connections" map.

**SCORING GUIDANCE** (110 Points)

The applicant with highest current daily person throughput will receive the full points for the measure. Remaining projects will receive a proportionate share of the full points. For example, if the application being scored had a daily person throughput of 1,000 people and the top project had a daily person throughput of 1,500 people, this applicant would receive (1,000/1,500)*110 points or 73 points.

B. **MEASURE**: Provide the forecast (2040) average daily traffic volume at the same location along the A-minor arterial or non-freeway principal arterial project length, as identified in the previous measure. The applicant may choose to use a county or city travel demand model based on the Metropolitan Council model to identify the forecast (2040) average daily traffic volume or have Metropolitan Council staff determine the forecast volume using the Metropolitan Council model and project location. Respond as appropriate to the use of one type of forecast model. (65 Points)

- For new roadways, identify the modeled forecast daily traffic volume

**RESPONSE**:

- Use Metropolitan Council model to determine forecast (2040) ADT volume☐

Commented [PS1]: New text

Commented [PS2]: Confirm year

- If checked, METC Staff will provide Forecast (2040) ADT volume _____

OR

**RESPONSE**:

- Identify the approved county or city travel demand model to determine forecast (2040) ADT volume: _____
- Forecast (2040) ADT volume: _____

**SCORING GUIDANCE** (65 Points)

The applicant with the highest forecast (2040) ADT volume will receive the full points for the measure. Remaining projects will receive a proportionate share of the full points. For example, if the application being scored had a daily forecast of 28,000 vehicles and the top project had a daily forecast of 32,000 vehicles, this applicant would receive (28,000/32,000)*65 points or 57 points.

## *3. Equity and Housing Performance (100 Points)*

This criterion addresses the *Council's role in advancing equity* by examining how a project directly provides benefits to, or impacts (positive and negative) low-income populations, people of color, people with disabilities, youth and ~~the elderly~~older adults. The criterion evaluates whether the applicant engaged these populations to identify transportation needs and potential solutions and how the project will address these identified needs. The criterion also evaluates a community's overall efforts to implement affordable housing and how the project improves multimodal access to affordable housing residents.

A. **MEASURE**: Socio-Economic Equity

1. **Sub-measure**: Equity Population Engagement (0 to 20 points): A successful project is one that is the result of active engagement of low-income populations, people of color, persons with disabilities, youth and ~~the elderly~~older adults. Engagement should occur prior to and during a project's development, with the intent to provide direct benefits to, or solve, an expressed transportation issue, while also limiting and mitigating any negative impacts. Describe and map the location of any low-income populations, people of color, disabled populations, youth or ~~the elderly~~older adults within a ½ mile of the proposed project. Describe how these specific populations were engaged ~~and provided outreach to~~, whether through community planning efforts, project needs identification, or during the project development process. Describe what engagement methods and tools were used and how the input from these groups is reflected in the project's~~'~~ purpose and need and design. Elements of quality engagement include: outreach and engagement to specific communities and populations that are likely to be directly impacted by the project; techniques to reach out to populations traditionally not involved in community engagement related to transportation projects; feedback from these populations identifying potential positive and negative elements of the proposed project through engagement, study recommendations, or plans that provide feedback from populations that may be impacted by the proposed project. If relevant, describe how NEPA or Title VI regulations will guide engagement activities.

(Limit 1,400 characters; approximately 200 words):

2. **Sub-measure:** Equity Population Benefits and Impacts (0 to 30 points): A successful project is one that has been designed to provide direct benefits to low-income populations, people of color, persons with disabilities, youth and ~~the elderly~~older adults. All projects must mitigate potential negative benefits as required under federal law. Projects that are designed to provide benefits go beyond the mitigation requirement to proactively provide transportation benefits and solve transportation issues experienced by Equity populations.

   a. (0 to 30 points) Describe the project's benefits to low-income populations, people of color, children, people with disabilities, and ~~the elderly~~older adults. Benefits could relate to pedestrian and bicycle safety improvements; public health benefits; direct access improvements for residents or improved access to destinations such as jobs, school, health care or other; travel time improvements; gap closures; new transportation services or modal options, leveraging of other beneficial projects and investments; and/or community connection and cohesion improvements. Note that this is not an exhaustive list.

   (Limit 2,800 characters; approximately 400 words):

   b. (-10 to 0 points) Describe any negative impacts to low-income populations, people of color, children, people with disabilities, and ~~the elderly~~older adults created by the project, along with measures that will be taken to mitigate them. Negative impacts that are not adequately mitigated can result in a reduction in points.

   (Limit 2,800 characters; approximately 400 words):

   Below is a list of negative impacts. Note that this is not an exhaustive list.

   - Increased difficulty in street crossing caused by increased roadway width, increased traffic speed, wider turning radii, or other elements that negatively impact pedestrian access.
   - Increased noise.
   - Decreased pedestrian access through sidewalk removal / narrowing, placement of barriers along the walking path, increase in auto-oriented curb cuts, etc.
   - Project elements that are detrimental to location-based air quality by increasing stop/start activity at intersections, creating vehicle idling areas, directing an increased number of vehicles to a particular point, etc.
   - Increased speed and/or "cut-through" traffic.
   - Removed or diminished safe bicycle access.
   - Inclusion of some other barrier to access to jobs and other destinations.

- Displacement of residents and businesses.
- Mitigation of temporary construction/implementation impacts such as dust; noise; reduced access for travelers and to businesses; disruption of utilities; and eliminated street crossings.
- Other

3. **Sub-measure: Bonus Points (0 to 25 points)** Those projects that score at least 80% of the maximum total points available through sub-measures 1 and 2 will be awarded bonus points based on the geographic location of the project. These points will be assigned as follows, based on the highest-scoring geography the project contacts:
   ~~a. 25 points to projects within an Area of Concentrated Poverty with 50% or more people of color~~
   ~~b.~~a. ~~20~~ 25 points to projects within an Area of Concentrated Poverty
   ~~c.~~b. ~~15~~ 20 points to projects within census tracts with the percent of population in poverty or population of color above the regional average percent
   ~~d.~~c. 10 points for all other areas

   Upload the "Socio-Economic Conditions" map used for this measure.

   **RESPONSE** (Select one, based on the "Socio-Economic Conditions" map):

   - ~~Project is located in an Area of Concentrated Poverty where 50% or more of residents are people of color (ACP50): ☐~~
   - Project is located in an Area of Concentrated Poverty: ☐
   - Project's census tracts are above the regional average for population in poverty or population of color: ☐
   - Project located in a census tract that is below the regional average for population in poverty or populations of color~~, or includes children, people with disabilities, or the elderly~~: ☐

**SCORING GUIDANCE** (50 Points)

Each application will be qualitatively scored based on the available points for each measure and will receive the number of points awarded. If the applicant receives at least 80% of the available points, i.e., 40 points for the Roadway applications, the project will receive Bonus points as described under sub-measure 3. If an applicant qualifies for Bonus points it will result in a Socio-Economic Equity score of more than the total points available.

B. **MEASURE**: Projects will be scored based on two housing measures: 1. the 2019 Housing Performance Score for the city or township in which the project is located (40 points) and 2. the project's connection to affordable housing (10 points) as described below.

**Part 1 (40 points): Housing Performance Score**

A city or township's housing performance score is calculated annually by the Metropolitan Council using data from four categories: new affordable or mixed-income housing completed in the last ten years; preservation projects completed in the last seven years and/or substantial rehabilitation projects completed in the last three years; housing program participation and production, and housing policies and ordinances; and characteristics of the existing housing stock. Data for the housing performance scores are updated each year by the Council, and the city or township is provided with an opportunity to review and revise the information.

Council staff will use the most current housing score for each city or township. If the project is located in more than one jurisdiction, the points will be awarded based on a weighted average using length or population of the project in each jurisdiction. For stand-alone intersection, bridge, underpass, and interchange projects, a one-mile radius-buffer will be drawn around the project. If the radius-buffer enters more than one jurisdiction, the points will be awarded based on the proportionate population of the Census blocks in each jurisdiction that are all or partially located in the area within the one-mile radius-buffer. If a project is located in a city or township with no allocation of affordable housing need (either there is no forecasted household growth or the area does not have land to support sewered development), the project will not be disadvantaged by this measure and the project's total score will be adjusted during scoring to remove this scoring measure.

**RESPONSE**: (NOTE: The below bullets vary slightly by funding category)

- City/Township: _____
- Total project cost: _____
- Length of Segment (For stand-alone projects, enter population from Regional Economy map) within each City/Township: _____
- Percent of total funds to be spent within City/Township: _____

**Part 2 (10 points): Affordable Housing Access**

This measure is a qualitative scoring measure. Describe and map any affordable housing developments— planned, under construction or existing, within ½ mile of the proposed project. The applicant should note the development stage, number of units, number of bedrooms per unit, and level of affordability using 2019 affordability limits. Also note whether the affordability is guaranteed through funding restrictions (i.e. LIHTC, 4d) or is unsubsidized, if housing choice vouchers are/will be accepted, and if there is a fair housing marketing plan required or in place.

Describe how the proposed project will improve or impact access for residents of the affordable housing locations within ½ mile of the project. This should include a description of improved access by all modes, automobiles, transit, bicycle and pedestrian access. Since residents of affordable housing are more likely not to own a private vehicle, higher points will be provided to roadway projects that include other multimodal access improvements.

**RESPONSE**:

(Limit 2,100 characters; approximately 300 words):

**SCORING GUIDANCE** (50 Points)

Part 1 (40 points): The applicant with the highest 2019 Housing Performance Score will receive the full points. Remaining projects will receive a proportionate share of the full points. For example, if the application being scored had a Housing Performance Score of 55 and the top project had a Housing Performance Score of 90, this applicant would receive (55/90)*40 points or 24 points.

Projects will use the city Housing Performance Score based on the project location. If a project is located in more than one jurisdiction, the points will be awarded based on a weighted average of the city or township scores for the project location based on the length of the project in each jurisdiction. For stand-alone roadway (intersection, bridge, underpass, and interchange) projects, a one-mile radius-buffer will be drawn around the project. If the radius-buffer enters more than one jurisdiction, the points

will be awarded based on the proportionate population of the Census blocks in each jurisdiction that are all or partially located in the area within the one-mile radius-buffer.

If a project is located in a city or township with no allocation of affordable housing need (either there is no forecasted household growth or the area does not have land to support sewered development), the project's total score will be adjusted as a result. If this is the case, the hold-harmless method will be used: the total points possible in the application will be 960 instead of 1,000. The total points awarded through the rest of the application (900 as a hypothetical example) will be divided by 960, then multiplied by 1,000. Therefore, a project scoring 900 out of 960, will equate to 938 points on a 1,000-point scale. If a portion of the project is located in a city with an affordable housing allocation and the other portion is located in a township with no affordable housing allocation, then a combination of the Housing Performance Score (or weighted average) and the hold-harmless method should be used. This will result in a total score that will be somewhere between 960 and 1,000; then the score will need to be adjusted to fit a 1,000-point scale. NOTE: Any community without a Housing Performance Score in 2018 will be awarded the better of its new score in 2020 and the above method. NOTE: in these cases, the raw points from Part 2 will be included in the 960-point total.

Part 2 (10 points): The project that best provides meaningful improvements to access to the affordable housing units will receive the full 10 points. Multiple projects may receive the highest possible score of 10 points based on this assessment. Remaining projects will receive a share of the full points at the scorer's discretion.

Final Score (50 points): The scores in Parts 1 and 2 will be totaled. If no application gets 50 points, the highest-scoring project will be awarded 50 points, with other projects adjusted proportionately.

Note: Metropolitan Council staff will score this measure.

## *4. Infrastructure Age (40 Points)*

This criterion will assess the age of the roadway facility being improved. Roadway improvement investments should focus on the higher needs of an aging facility, whereas improvements to a recently reconstructed roadway does not display as efficient use of funds.

A. **MEASURE**: Identify the year of the roadway's original construction or most recent reconstruction. If the reconstruction date is used for the roadway, a full reconstruction must have been completed during the indicated year. Routine maintenance, such as an overlay or sealcoating project does not constitute a reconstruction and should not be used to determine the infrastructure age.

   If construction was completed over several years, enter the segment lengths for each year. The average age will be calculated.

   **RESPONSE**:

   - Year of original roadway construction or most recent reconstruction: _____
   - Segment length: _____
   - Average Age: _____ (online calculation)

**SCORING GUIDANCE** (40 Points)

The applicant with the oldest roadway will receive full points. Remaining projects will receive a

proportionate share of the full points. For example, if the application being scored was constructed 41 years ago and the oldest project was constructed 48 years ago, this applicant would receive (41/48)*40 points or 34 points.

This measure is not applicable to new roadway projects, so the project's total score for new roadways will be adjusted as a result.

If this is the case, then the total points possible in the application will be 960 instead of 1,000. The total points awarded through the rest of the application (900 as a hypothetical example) will be divided by 960, then multiplied by 1,000. Therefore, a project scoring 900 out of 960, will equate to 938 points on a 1,000-point scale.

Note: Because of the reporting of year of construction, it is possible for multiple projects to receive the full allotment of 40 points.

## *5. Congestion Reduction/Air Quality (150 Points)*

This criterion measures the project's ability to reduce intersection delay and emissions during peak hour conditions. In addition, it will address its ability to improve congested intersections operating at unacceptable levels of service during peak hour conditions.

A. **MEASURE**: Conduct a capacity analysis at one or more of the intersections (or rail crossings) being improved by the roadway project using existing turning movement counts (collected within the last three years) in the weekday a.m. or p.m. peak hour and Synchro or HCM software. The analysis must include build and no build conditions (with and without the project improvements). The applicant must show the current total peak hour delay at one or more intersections (or rail crossings) and the reduction in total peak hour intersection delay at these intersections (or rail crossings) in seconds, due to the project. If more than one intersection is examined, then the delay reduced by each intersection (or rail crossing) can be can added together to determine the total delay reduced by the project.

   - For new roadways, identify the key intersection(s) on any parallel roadway(s) that will experience reduced delay as a result of traffic diverting to the new roadway. If more than one intersection is examined, then the delay reduced by each intersection can be can added together.
   - For roadway projects that include a railroad crossing, the applicant should conduct fieldwork during either the weekday a.m. or p.m. peak hour to determine the total peak hour delay reduced by the project. Applicants can also add together intersection delay reduced and railroad delay reduced, if they both will be improved by the project.

   The applicant should include the appropriate Synchro or HCM full reports (including the Timing Page Report) that support the improvement in total peak hour delay and should conduct the analysis using the following:

   - Under the network settings, all defaults should be used for lanes, saturation flow rates, volumes, and simulation
   - Use Synchro's automatic optimization to determine cycle, offset and splits (for traffic signals). Use the setting when assessing delay both with and without the project. This methodology will ensure that all applicants start with their signal systems optimized when determining existing delay.

- Project improvements assumed in the build condition should be reflected in the total project cost, such as additional through or turn lanes and protective left-turn phasing
- Roadway lengths for intersection approaches must be the same length for before and after scenarios
- An average weekday should be used for the existing conditions instead of a weekend, peak holiday, or special event time period that is not representative of the corridor for most of the year
- For most projects, the volumes with and without the project should be the same; however, some project types such as new roadways, new ramps, or new interchanges may have different volumes.

Total Peak Hour Delay Reduced (Seconds) = Total Peak Hour Delay Per Vehicle x Vehicles Per Hour

**RESPONSE:**

- Total Peak Hour Delay/Vehicle without the Project (Seconds/Vehicle):_____
- Total Peak Hour Delay/Vehicle with the Project (Seconds/Vehicle):_____
- Total Peak Hour Delay/Vehicle Reduced by the Project (Seconds/Vehicle):_____ (automatically calculated)
- Volume without the Project (Vehicles Per Hour): _____
- Volume with the Project (Vehicles Per Hour): _____
- Total Peak Hour Delay Reduced by the Project (Seconds): _____ (automatically calculated)

**EXPLANATION** of methodology used to calculate railroad crossing delay, if applicable, or date of last signal retiming for signalized corridors (Limit 1,400 characters; approximately 200 words):

Upload Synchro or HCM Report

**SCORING GUIDANCE** (100 Points)

The applicant with the most peak hour vehicle delay reduced by the project improvement will receive the full points for the measure. Remaining projects will receive a proportionate share of the points. For example, if the application being scored reduced delay by 5,000 seconds and the top project reduced delay by 25,000 seconds, this applicant would receive (5,000/25,000)*100 points, or 20 points.

B. **MEASURE**: Using the Synchro or HCM analysis completed in the previous measure, identify the total peak hour emissions reduction in kilograms (CO, NOX, VOC) due to the project. The applicant should include the appropriate Synchro or HCM reports (including the Timing Page Report) that support the improvement in total peak hour emissions. If more than one intersection is examined, then the emissions reduced by each intersection can be can added together to determine the total emissions reduced by the project.

**Roadway projects that do not include new roadway segments or railroad grade-separation elements:**

- Total Peak Hour Emissions Reduced (Kilograms) = Total Peak Hour Emissions without the project – Total Peak Hour Emissions with the Project

**RESPONSE** (Calculation):

- Total (CO, NOX, and VOC) Peak Hour Emissions without the Project (Kilograms):_____
- Total (CO, NOX, and VOC) Peak Hour Emissions with the Project (Kilograms):_____
- Total (CO, NOX, and VOC) Peak Hour Emissions Reduced by the Project (Kilograms):_____

**Roadway projects that are constructing new roadway segments, but do not include railroad grade-separation elements:**

For new roadways, identify the key intersection(s) on any parallel roadway(s) that will experience reduced emissions as a result of traffic diverting to the new roadway (using Synchro). If more than one intersection is examined, then the emissions reduced by each intersection can be can added together.

However, new roadways will also generate new emissions compared to existing conditions as traffic diverts from the parallel roadways. The applicant needs to estimate four variables to determine the new emissions generated once the project is completed on any major intersections. Those variables include: speed, vehicle mile traveled, delay, and total vehicle stops. The applicant needs to detail any assumptions used for conditions after the project is built. The variables will be used in the exact same equation used Synchro required of the other project types.

The equation below should only be used to estimate the new emissions generated by new roadways.

Enter data for Parallel Roadways and New Roadways.

*Parallel Roadways*

- Total Peak Hour Emissions Reduced (Kilograms) = Total Peak Hour Emissions without the project – Total Peak Hour Emissions with the Project

**RESPONSE**:

- Total (CO, NOX, and VOC) Peak Hour Emissions without the Project (Kilograms):_____ (Applicant inputs number)
- Total (CO, NOX, and VOC) Peak Hour Emissions with the Project (Kilograms):_____ (Applicant inputs number)
- Total (CO, NOX, and VOC) Peak Hour Emissions Reduced by the Project (Kilograms):_____ (Online Calculation)

*New Roadway Portion*

Enter data for New Roadway.

- Cruise speed in miles per hour with the project:_____ (Applicant inputs number)
- Vehicle miles traveled with the project:_____ (Applicant inputs number)
- Total delay in hours with the project:_____ (Applicant inputs number)
- Total stops in vehicles per hour with the project:_____ (Applicant inputs number)
- Fuel consumption in gallons: _____ (Applicant inputs number)

- Total (CO, NOX, and VOC) Peak Hour Emissions Reduced or Produced on New Roadway (Kilograms):_____

**EXPLANATION** of methodology and assumptions used: (Limit 1,400 characters; approximately 200 words)

Speed = cruise speed in miles per hour
Total Travel = vehicle miles traveled
Total Delay = total delay in hours
Stops = total stops in vehicles per hour
K4 = 0.075283-0.0015892 * Speed + 0.000015066 * Speed2
K2 = 0.7329
K5 = 0.0000061411 * Speed2

F2 = Fuel consumption in gallons

CO = F2 * 0.0699 kg/gallon
NOX = F2 * 0.0136 kg/gallon
VOC = F2 * 0.0162 kg/gallon

Total = Total Peak Hour Emissions reduced on Parallel Roadways – (CO + NOx + VOC)

- Total (CO, NOX, and VOC) Peak Hour Emissions Reduced by the Project (Kilograms): _____ (calculated online)

### Roadway projects that include railroad grade-separation elements:

For roadway projects that include a railroad crossing, the applicant needs to input four variables before and after the project to determine the change in emissions. Those variables include: speed, vehicle mile traveled, delay, and total vehicle stops. The applicant needs to conduct fieldwork during either the a.m. or p.m. peak hour to determine the existing conditions and then detail any assumptions used for conditions after the project is built. The variables will be used in the exact same equation used within the software program (i.e., Synchro) required of the other project types. Therefore, the approach to calculate the kilograms emissions reduced for railroad grade-separation projects will be comparable to intersection improvement projects.

**RESPONSE**:

- Cruise speed in miles per hour without the project:_____ (Applicant inputs number)
- Vehicle miles traveled without the project:_____ (Applicant inputs number)
- Total delay in hours without the project:_____ (Applicant inputs number)
- Total stops in vehicles per hour without the project:_____ (Applicant inputs number)
- Cruise speed in miles per hour with the project:_____ (Applicant inputs number)
- Vehicle miles traveled with the project:_____ (Applicant inputs number)
- Total delay in hours with the project:_____ (Applicant inputs number)
- Total stops in vehicles per hour with the project:_____ (Applicant inputs number)
- Fuel consumption in gallons (F1)
- Fuel consumption in gallons (F2)
- Fuel consumption in gallons (F3)

Speed = cruise speed in miles per hour
Total Travel = vehicle miles traveled
Total Delay = total delay in hours
Stops = total stops in vehicles per hour
K1 = 0.075283-0.0015892 * Speed + 0.000015066 * Speed2
K2 = 0.7329
K3 = 0.0000061411 * Speed2

F1 (or F2 – without the project) = Fuel consumption in gallons

F1 = Total Travel * k1 + Total Delay * k2 + Stops * k3
F2 = Total Travel * k1 + Total Delay * k2 + Stops * k3

F3 = F1 – F2

CO = F3 * 0.0699 kg/gallon
NOX = F3 * 0.0136 kg/gallon
VOC = F3 * 0.0162 kg/gallon

Equation Automatically Provides Emissions Reduced:

- Total (CO, NOX, and VOC) Peak Hour Emissions Reduced by the Project (Kilograms): _____ (Online Calculation)

**EXPLANATION** of methodology and assumptions used (Limit 1,400 characters; approximately 200 words):

SCORING GUIDANCE (50 Points)

The applicant with the most kilograms reduced by the project improvement will receive the full points for the measure. Remaining projects will receive a proportionate share of the full. For example, if the application being scored reduced emissions by 3 kilograms and the top project reduced emissions by 5 kilograms, this applicant would receive (3/5)*50 points or 30 points.

## *6. Safety (150 Points)*

This criterion addresses the project's ability to correct deficiencies and improve the overall safety of an existing or future roadway facility. It will assess the project's monetized safety benefits.

A. **MEASURE**: Respond as appropriate to one of the two project types below.

**Roadway projects that do not include railroad grade-separation elements:**
Calculate the reduction in the total number of crashes due to improvements on the A-minor arterial or non-freeway principal arterial made by the project. The applicant must base the estimate of crash reduction on the methodology consistent with the latest Highway Safety Improvement Program (HSIP) application (*www.dot.state.mn.us/stateaid/trafficsafety.html*). Applicants should focus on the crash analysis for reactive projects.

Crash data must be obtained for the project length using the MnDOT TIS system average for calendar years ~~2016~~ 2018 through ~~2018~~2020. Crash data should include all crash types and severities, including pedestrian and bicycle crashes.

Applicants should request crash data from MnDOT as early as possible. The applicant must then attach a listing of the crashes reduced and the HSIP Benefit/Cost (B/C) worksheet (*www.dot.state.mn.us/stateaid/trafficsafety.html*) that identifies the resulting benefit associated with the project. As part of the response, please detail and attach the crash modification factor(s) used from FHWA's Crash Modification Factors Clearinghouse: *http://www.cmfclearinghouse.org/*. As part of the Regional Solicitation Before & After Study, Phase 2 (2021), a list of commonly used crash modification factors was created. Applicants have the option to use these crash modification factors (posted on the Metropolitan Council's Regional Solicitation website, under Application Resources) or find a more appropriate one on FHWA's Clearinghouse.

Commented [PS3]: New text

This measure requests the monetized safety benefit of the project. The cost of the project is scored in the Cost Effectiveness criterion.

### New Roadways:

1. For new roadways, identify the parallel roadway(s) from which traffic will be diverted to the new roadway.
2. Using the crash data for ~~2016~~2018-~~2018~~2020, calculate the existing crash rate for the parallel roadway(s) identified in Step 1.
3. Identify the daily traffic volume that will be relocated from the parallel roadway(s) to the new roadway.
4. Calculate the number of crashes on the parallel roadway(s) using the existing crash rate from Step 2 and the relocated traffic volume to determine the change in number of crashes due to the relocated traffic volume. For instance, if 5,000 vehicles are expected to relocate from the existing parallel roadway to the new roadway, calculate the number of crashes related to the 5,000 vehicles.
5. Identify the average crash rate for the new roadway using MnDOT's average crash rates by roadway type. Using the average crash rate for the new roadway, calculate the number of crashes related to the relocated traffic (i.e., the 5,000 vehicles).
6. Calculate the crash reduction factor using the existing number of crashes on the existing parallel roadway (Step 4) compared to the estimated crashes calculated for the new roadway (Step 5), due to the relocated traffic volume (i.e., the 5,000 vehicles).
7. The calculated crash reduction factor should be used in the HSIP B/C worksheet.
8. Upload additional documentation materials into the "Other Attachments" Form in the online application.

**RESPONSE**:

- Crash Modification Factor Used (Limit 700 characters; approximately 100 words): _____
- Rationale for Crash Modifications Selected (Limit 1,400 characters; approximately 200 words): _____
- Project Benefit ($) from B/C ratio: _____
- Total Fatal (K) Crashes: _____
- Total Serious Injury (A) Crashes: _____
- Total Non-Motorized Fatal and Serious Injury Crashes: _____
- Total Crashes: _____

- Total Fatal (K) Crashes Reduced by Project: _____
- Total Serious Injury (A) Crashes Reduced by Project: _____
- Total Non-Motorized Fatal and Serious Injury Crashes Reduced by Project: _____
- Total Crashes Reduced by Project: _____

Upload Crash Modification Factors and B/C Worksheet.

**Roadway projects that include railroad grade-separation elements:**
Since the number of observed crashes at an existing at-grade railroad crossing is minor compared to an intersection, this measure will assess crash risk exposure that exists in order to compare projects. As a proactive safety measure, railroad grade-separation projects eliminate the crash risk exposure.

- Crash Risk Exposure Eliminated = current average annual daily traffic volume x average number of daily trains at the at-grade crossing

**RESPONSE** (Calculation):

- Current AADT volume:_____
- Average daily trains:_____
- Crash Risk Exposure eliminated: (automatically calculated) _____

SCORING GUIDANCE (150 Points)

This measure will be considered separately for projects that do and do not include a railroad grade-separation project. As a result, two projects (one project without a railroad grade-separation project and one with a railroad grade-separation project) may receive the full points.

For projects that do not include a grade-separation project, the applicant with the highest dollar value of benefits will receive the full points for the measure. Remaining projects will receive a proportionate share of the full points. For example, if the application being scored had safety benefits of $11,000,000 and the top project had safety benefits of $16,000,000, this applicant would receive (11,000,000/16,000,000)*150 points or 103 points.

For railroad grade-separation projects, the applicant with the highest crash risk exposure eliminated due to the project will receive the full points for the measure. Remaining projects will receive a proportionate share of the full points. For example, if the application being scored reduced 11,000 exposures and the top project reduced 16,000 exposures this applicant would receive (11,000 /16,000)*150 points or 103 points.

B. **MEASURE**: Discuss how the project will improve safety for pedestrians. Safety countermeasures for pedestrians can include those identified by the FHWA as part of its *Safe Transportation for Every Pedestrian program* or others in its *Proven Safety Countermeasures* (e.g., pedestrian refuge islands, raised crosswalks, pedestrian hybrid beacons, leading pedestrian intervals). More information about pedestrian safety best practices is also available in MnDOT's *Best Practices for Pedestrian/Bicycle Safety*.

**SCORING GUIDANCE** (30 Points)

The project that will provide the most improvement to pedestrian safety will receive full points. Remaining projects will receive a share of the full points at the scorer's discretion.

Commented [PS4]: See information item for proposed new text, which would replace this content.

## 7. Multimodal Elements and Existing Connections (100 Points)

This criterion measures how the project improves the travel experience, safety, and security for other modes of transportation and addresses the safe integration of these modes. The Transportation Policy Plan requires that explicit consideration of all users of the transportation system be considered in the planning and scoping phase of roadway projects.

A. **MEASURE**: Describe how the project positively affects the multimodal system.

- Discuss any bicycle, pedestrian, or transit elements that are included as part of the project and how they improve the travel experience, safety, and security for users of these modes. Applicants should make sure that new multimodal elements described in the response are accounted for as part of the cost estimate form earlier in the application. Applicants should note if there is no transit service in the project area and identify supporting studies or plans that address why a mode may not be incorporated in the project (e.g., a bicycle system plan that locates bikeway facilities on a lower-volume parallel route).
- Describe how the proposed multimodal improvements positively affect identified alignments in the Regional Bicycle Transportation Network (RBTN) or along a regional trail, if applicable.
- Describe how the proposed multimodal improvements either provide a new, or improve an existing Major River Bicycle Barrier Crossing (MRBBC) as defined in the 2040 Transportation Policy Plan (TPP) or how they provide a new or improved crossing of a Regional Bicycle Barrier with respect to the tiered Regional Bicycle Barrier Crossing Improvement Areas as defined in the TPP and Technical Addendum to the Regional Bicycle Barriers Study (May 2019), if applicable.
- Discuss the existing bicycle, pedestrian, and transit connections and how the project enhances these connections.
- Discuss whether the project implements specific locations identified as being deficient in a completed ADA Transition Plan.

**RESPONSE** (Limit 2,800 characters; approximately 400 words):

**SCORING GUIDANCE** (100 Points)

The project that most positively affects the multimodal system will receive the full points. Remaining projects will receive a share of the full points at the scorer's discretion. The project score will be based on the quality of the improvements, as opposed to being based solely on the number of modes addressed. Points can be earned for incorporating multimodal project elements, positively affecting identified alignments in the Regional Bicycle Transportation Network (RBTN), regional trail, Major River Bicycle Barrier Crossing, or Regional Bicycle Barrier, for making connections with existing multimodal systems, or helping to implement an ADA Transition Plan. Projects do not need all of these elements to be awarded all of the points. Multimodal elements for rural roadway projects may include wider shoulders that will be used by bicyclists and pedestrians.

## 8. Risk Assessment (75 Points)

This criterion measures the number of risks associated with successfully building the project. High-risk applications increase the likelihood that projects will withdraw at a later date. If this happens, the region is forced to reallocate the federal funds in a short amount of time or return them to the US Department of Transportation. These risks are outlined in the checklist in the required Risk Assessment.

A. **MEASURE**: Applications involving construction must complete the Risk Assessment. This checklist includes activities completed to-date, as well as an assessment of risks (e.g., right-of-way acquisition, proximity to historic properties, etc.).

**RESPONSE** (Complete Risk Assessment):

Please check those that apply and fill in anticipated completion dates for all projects~~, except for a~~New/expanded transit service projects will receive full credit for items 2-5 but must fill out item 1. ~~or t~~Transit vehicle purchases will receive full credit.

**1. Public Involvement (20 Percent of Points)**

Projects that have been through a public process with residents and other interested public entities are more likely than others to be successful. The project applicant must indicate that events and/or targeted outreach (e.g., surveys and other web-based input) were held to help identify the transportation problem, how the potential solution was selected instead of other options, and the public involvement completed to date on the project. The focus of this section is on the *opportunity for public input* as opposed to the quality of input. NOTE: A written response is required and failure to respond will result in zero points.

~~List Dates of most recent meetings and outreach specific to this project:~~

- ~~Meeting with general public: _____~~
- ~~Meeting with partner agencies: _____~~
- ~~Targeted online/mail outreach: _____~~
  - ~~Number of respondents: _____~~

100% ☐ Multiple types of targeted outreach efforts (such as meetings or online/mail outreach)~~Meetings~~ specific to this project with the general public and partner agencies have been used to help identify the project need.

~~75% ☐ Targeted outreach specific to this project with the general public and partner agencies have been used to help identify the project need.~~

50% ☐ At least one meeting specific to this project with the general public has been used to help identify the project need.

50% ☐ At least ~~one meeting~~ online/mail outreach effort specific to this project with the general public ~~key partner agencies~~ has been used to help identify the project need.

25% ☐ No meeting or outreach specific to the project was conducted, but the project was identified through meetings and/or outreach related to a larger planning effort.

0% ☐ No outreach has led to the selection of this project.

**RESPONSE** (Limit 2,800 characters; approximately 400 words). Describe the type(s) of outreach selected for this project (i.e., online or in-person meetings, surveys, demonstration projects), the method(s) used to announce outreach opportunities, and how many people participated. Include any public website links to outreach opportunities.~~:~~

**2. Layout (25 Percent of Points)**

Layout ~~should~~ includes proposed geometrics and existing and proposed right-of-way boundaries. A basic layout should include a base map (north arrow; scale; legend;* city and/or county limits; existing ROW, labeled; existing signals;* and bridge numbers*) and design data (proposed alignments; bike and/or roadway lane widths; shoulder width;* proposed signals;* and proposed ROW). An aerial photograph with a line showing the project's termini does not suffice and will be awarded zero points.

*If applicable

100% ☐ Layout approved by the applicant and all impacted jurisdictions (i.e., cities/counties/MnDOT ~~that the project goes through or agencies that maintain the roadway(s))~~. If a MnDOT trunk highway is impacted, approval by MnDOT must have occurred to receive full points. ~~-~~ **A PDF of the layout must be attached along with letters from each jurisdiction to receive points.**

100% ☐ A layout does not apply (signal replacement/signal timing, stand-alone streetscaping, minor intersection improvements). Applicants that are not certain whether a layout is required should contact Colleen Brown at MnDOT Metro State Aid – colleen.brown@state.mn.us.

50% ☐ Layout completed but not approved by all jurisdictions. **A PDF of the layout must be attached to receive points.**

25% ☐ Layout has been started but is not complete. **A PDF of the layout must be attached to receive points.**

0% ☐ Layout has not been started

~~3. Anticipated date or date of completion: _____~~

**~~4.~~3. Review of Section 106 Historic Resources (15 Percent of Points)**

100% ☐ No known historic properties eligible for or listed in the National Register of Historic Places are located in the project area, and project is not located on an identified historic bridge

100% ☐ There are historical/archeological properties present but determination of "no historic properties affected" is anticipated.

80% ☐ Historic/archeological property impacted; determination of "no adverse effect" anticipated

40% ☐ Historic/archeological property impacted; determination of "adverse effect" anticipated

0% ☐ Unsure if there are any historic/archaeological properties in the project area.

Project is located on an identified historic bridge: ☐

**~~5.~~4. Right-of-Way (25 Percent of Points)**

100% ☐ Right-of-way, permanent or temporary easements, and MnDOT agreement/limited-use permit either not required or all have been acquired

50% ☐ Right-of-way, permanent or temporary easements, and/or MnDOT agreement/limited-use permit required~~,~~ - plat, legal descriptions, or official map complete

25% ☐ Right-of-way, permanent or temporary easements, and/or MnDOT agreement/limited-use permit required~~,~~ - parcels identified

0% ☐ Right-of-way, permanent or temporary easements, and/or MnDOT agreement/limited-use permit required~~,~~ – parcels not all identified

~~Anticipated date or date of acquisition _____~~

**~~6.~~5. Railroad Involvement (15 Percent of Points)**

100% ☐ No railroad involvement on project or railroad Right-of-Way agreement is executed (include signature page, if applicable)

50% ☐ Railroad Right-of-Way Agreement required; negotiations have begun

0% ☐ Railroad Right-of-Way Agreement required; negotiations have not begun.

Anticipated date or date of executed Agreement _____

**SCORING GUIDANCE** (75 Points)

The applicant with the most points on the Risk Assessment (more points equate to less project risk) will receive the full points for the measure. Remaining projects will receive a proportionate share of the full points. For example, if the application being scored had 40 points and the top project had 70 points, this applicant would receive (40/70)*75 points or 43 points.

## *9. Cost Effectiveness (100 Points)*

This criterion will assess the project's cost effectiveness based on the total TAB-eligible project cost (not including noise walls) and total points awarded in the previous 8 criteria.

A. **MEASURE**: This measure will calculate the cost effectiveness of the project. Metropolitan Council staff will divide the number of points awarded in the previous criteria by the TAB-eligible project cost (not including noise walls). If a project has been awarded other outside, competitive funding (e.g., state bonding, Transportation Economic Development Program, Minnesota Highway Freight Program), project sponsors may reduce the total project cost for the purposes of this scoring measure by the amount of the outside funding award.

- Cost effectiveness = total number of points awarded in previous criteria/total TAB-eligible project cost (not including noise walls)

**RESPONSE** (This measure will be calculated after the scores for the other measures are tabulated by the Scoring Committee):

- Total Project Cost (entered in Project Cost Form):_____ (automatically calculated)
- Enter amount of Noise Walls: _____
- Enter amount of any outside, competitive funding (attach documentation of award): _____
- Points Awarded in Previous Criteria: ____ (entered by Metropolitan Council staff)

**SCORING GUIDANCE** (100 Points)

The applicant with the most points (i.e., the benefits) per dollar will receive the full points for the measure. Remaining projects will receive a proportionate share of the full points. For example, if the top project received .0005 points per dollar and the application being scored received .00025 points per dollar, this applicant would receive (.00025/.0005)*100 points or 50 points.

The scorer for this measure will also complete a reasonableness check of the total project cost that is used for this measure. The scorer may follow up with the applicant to clarify any questions. Up to 50 percent of points awarded for this measure can be deducted if the scorer does not believe that the cost estimate is reasonable.

**TOTAL: 1,100 POINTS**

# Roadway Reconstruction/Modernization

**Prioritizing Criteria and Measures**

**September 15, 2021**

**Definition:** A roadway project that does not add thru-lane capacity, but reconstructs, reclaims, and/or modernizes a corridor with improved safety, multimodal, or mobility elements (e.g., new turn lanes, traffic signal, or roundabout). Routine maintenance including mill and overlay projects are not eligible. Projects must be located on a non-freeway principal arterial or A-minor arterial functionally classified roadway, consistent with the latest TAB approved functional classification map.

## Examples of Roadway Reconstruction/Modernization Projects:

- ~~Intersection improvements, including innovative intersection designs~~
- ~~Alternative intersections such as unsignalized or signalized reduced conflict intersections (one intersection or multiple intersections)~~
- Interchange reconstructions that do not involve new ramp movements or added thru lanes
- ~~Turn lanes~~
- Two-lane to three-lane conversions (with a continuous center turn lane)
- Four-lane to three-lane conversions
- ~~Roundabouts~~
- ~~Addition or replacement of traffic signals~~
- Shoulder improvements
- Strengthening a non-10-ton roadway
- Raised medians, frontage roads, access modifications, or other access management
- Roadway improvements with the addition of multimodal elements
- Roadway improvements that add safety elements
- New alignments that replace an existing alignment and do not expand the number of lanes

## Scoring:

| Criteria and Measures | Points | % of Total Points |
|---|---|---|
| **1. Role in the Regional Transportation System and Economy** | **105** | **10%** |
| Measure A - Connection to Total Jobs and Manufacturing/ Distribution Jobs | 65 | |
| Measure B - Regional Truck Corridor Study Tiers | 40 | |
| **2. Usage** | **175** | **16%** |
| Measure A - Current daily person throughput | 110 | |
| Measure B - Forecast 2040 average daily traffic volume | 65 | |
| **3. Equity and Housing Performance** | **100** | **9%** |
| Measure A - Benefits and outreach to disadvantaged populations | 50 | |
| Measure B - Housing Performance Score/ affordable housing connection | 50 | |
| **4. Infrastructure Age/Condition** | **175** | **16%** |
| Measure A - Date of construction | 50 | |
| Measure B - Geometric, structural, or infrastructure deficiencies | 125 | |
| **5. Congestion Reduction/Air Quality** | **80** | **7%** |

| Criteria and Measures | Points | % of Total Points |
|---|---|---|
| Measure A - Vehicle delay reduced | 50 | |
| Measure B - Kg of emissions reduced | 30 | |
| **6. Safety** | **180** | **16%** |
| Measure A - Crashes reduced | 150 | |
| Measure B – Pedestrian Crash Reduction (Proactive) | 30 | |
| **7. Multimodal Elements and Existing Connections** | **110** | **10%** |
| Measure A - Transit, bicycle, or pedestrian project elements and connections | 110 | |
| **8. Risk Assessment** | **75** | **7%** |
| Measure A – Risk Assessment Form | 75 | |
| **9. Cost Effectiveness** | **100** | **9%** |
| Measure A – Cost effectiveness (total points awarded/total project cost) | 100 | |
| **Total** | **1,100** | |

## *Role in the Regional Transportation System and Economy (170 Points)*

Tying regional policy (Thrive MSP2040) to the Regional Solicitation, this criterion measures the project's ability to serve a transportation purpose within the regional transportation system and economy based on how it connects to employment, manufacturing/distribution-related employment, and post-secondary students; and how it aligns with the Regional Truck Corridor Study.

A. **MEASURE**: Reference the "Regional Economy" map generated at the beginning of the application process. Report the existing employment and manufacturing/distribution-related employment, and post-secondary students enrolled within one mile, as depicted on the "Regional Economy" map.

**RESPONSE** (Data from the "Regional Economy" map):

- Existing Employment within 1 Mile:_____(Maximum of 65 points)
- Existing Manufacturing/Distribution-Related Employment within 1 Mile:_____ (Maximum of 65 points)
- Existing Post-Secondary Students within 1 Mile: _____(Maximum of 40 points)

Upload the "Regional Economy" map used for this measure.

**SCORING GUIDANCE** (65 Points)

All Census block groups that are included within or intersect the buffer area around the project will be included.

The applicant with the highest existing total employment will receive the full points. Remaining projects will receive a proportionate share of the full points. For example, if the application being scored had 1,000 workers within one mile and the top project had 1,500 workers, this applicant would receive (1,000/1,500)*65 points or 43 points.

The applicant with the highest existing manufacturing/distribution-related employment will receive the

full points. Remaining projects will receive a proportionate share of the full points equal to the existing manufacturing/distribution-related employment within one mile of the project being scored divided by the project with the highest manufacturing/distribution-related employment within one mile multiplied by the maximum points available for the measure (30). For example, if the application being scored had 1,000 manufacturing/distribution-related workers within one mile and the top project had 1,500 manufacturing/distribution-related workers, this applicant would receive (1,000/1,500)*65 points or 43 points.

The applicant with the highest number of post-secondary students will receive 40 points. Remaining projects will receive a proportionate share of the 40 points. For example, if the application being scored had 1,000 students within one mile and the top project had 1,500 students, this applicant would receive (1,000/1,500)*40 points or 27 points.

The scorer will assess if the applicant would score highest with the total employment part of the measure, the manufacturing/distribution employment part of the measure, or the education part of the measure and give the applicant the highest of the three scores out of a maximum of 65 points.

Note: Due to the use of multiple sub-measures, two applicants can receive the full 65 points.

B. **MEASURE**: This criterion relies on the results on the Regional Truck Corridor Study, which prioritized all principal and minor arterials based on truck volume, truck percentage of total traffic, proximity to freight industry clusters, and proximity to regional freight terminals. The truck corridors were grouped into tiers 1, 2, and 3, in order of priority. Use the 2021 Updated Regional Truck Corridors tiers to respond to this measure: *2021 Updated Regional Truck Corridors.* (40 points)

~~Use the final study report for this measure~~:

**RESPONSE**: (Select one for your project, based on the updated 2021 Regional Truck Corridors ~~Study~~):

- Along Tier 1: ☐ Miles (to the nearest 0.1 miles) :_____
- Along Tier 2: ☐ Miles (to the nearest 0.1 miles) :_____
- Along Tier 3: ☐ Miles (to the nearest 0.1 miles) :_____
- The project provides a direct and immediate connection (i.e., intersects) with either a Tier 1, Tier 2, or Tier 3 corridor: ☐
- None of the tiers: ☐

**SCORING GUIDANCE** (40 Points)

Applicants will be awarded points as assigned in the above tiers:

- Projects along Tier 1: 40 points
- Projects along Tier 2: 30 points
- Projects along Tier 3: 20 points
- Projects that that provide a direct and immediate connection to a corridor: 10 points.
- None of the tiers: 0 points

If no applicant is along Tier 1, the top-scoring application(s) will be adjusted to 40 points, with the others

adjusted proportionately.

Note: Due to the use of tiered scoring, multiple applications can receive the full points.

## *2. Usage (175 Points)*

This criterion quantifies the project's potential impact by measuring the current daily person throughput and future vehicular traffic that will be served by the project. These roadway users directly benefit from the project improvements on the A-minor arterial or non-freeway principal arterial. For interchange reconstruction projects, the cross-street traffic volumes should be used instead of the mainline volumes.

A. **MEASURE**: The applicant must identify the location along the project length and provide the current AADT volume from the *MnDOT Traffic Mapping Application* ~~MnDOT 50-series maps (select Twin Cities Metro Area Street Series under Traffic Volume (AADT))~~ and existing transit routes that travel on the road (reference "Transit Connections" map). Due to the potential timing issues with when a traffic count was taken relative to the COVID-19 pandemic (and resulting drop in traffic volumes), applicants may also use a historic AADT volume from the MnDOT Traffic Mapping Application (instructions under the Help Document). Ridership data will be provided by the Metropolitan Council staff, if public transit is currently provided on the project length. Metropolitan Council staff will calculate the current daily person throughput at one location along the A-minor arterial or non-freeway principal arterial project length using the current average annual daily traffic (AADT) volume and average annual ridership.

- Current Daily Person Throughput = (current average annual daily traffic volume x 1.30 vehicle occupancy) + average annual daily transit ridership (2019)

**RESPONSE**:

- Location:_____
- Current AADT volume:_____
- Existing Transit Routes on the Project:_____

Upload "Transit Connections" map.

SCORING GUIDANCE (110 Points)

The applicant with highest current daily person throughput will receive the full points for the measure. Remaining projects will receive a proportionate share of the full points. For example, if the application being scored had a daily person throughput of 1,000 people and the top project had a daily person throughput of 1,500 people, this applicant would receive (1,000/1,500)*110 points or 73 points.

B. **MEASURE**: Provide the forecast (2040) average daily traffic volume at the same location along the A-minor arterial or non-freeway principal arterial project length, as identified in the previous measure. The applicant may choose to use a county or city travel demand model based on the Metropolitan Council model to identify the forecast (2040) average daily traffic volume or have Metropolitan Council staff determine the forecast volume using the Metropolitan Council model and project location. Respond as appropriate to the use of one type of forecast model.

**Commented [PS1]:** New text

**Commented [PS2]:** Confirm year with F&P

**RESPONSE**:

- Use Metropolitan Council model to determine forecast (2040) ADT volume☐
- If checked, METC Staff will provide Forecast (2040) ADT volume ☐

OR

**RESPONSE**:

- Identify the approved county or city travel demand model to determine forecast (2040) ADT volume: _____
- Forecast (2040) ADT volume : _____

SCORING GUIDANCE (65 Points)

The applicant with the highest forecast (2040) ADT volume will receive the full points for the measure. Remaining projects will receive a proportionate share of the full points. For example, if the application being scored had a daily forecast of 28,000 vehicles and the top project had a daily forecast of 32,000 vehicles, this applicant would receive (28,000/32,000)*65 points or 57 points.

## *3. Equity and Housing Performance (100 Points)*

This criterion addresses the *Council's role in advancing equity* by examining how a project directly provides benefits to, or impacts (positive and negative) low-income populations, people of color, people with disabilities, youth and ~~the elderly~~older adults. The criterion evaluates whether the applicant engaged these populations to identify transportation needs and potential solutions and how the project will address these identified needs. The criterion also evaluates a community's overall efforts to implement affordable housing and how the project improves multimodal access to affordable housing residents.

A. **MEASURE**: Socio-Economic Equity

1. **Sub-measure**: Equity Population Engagement (0 to 20 points): A successful project is one that is the result of active engagement of low-income populations, people of color, persons with disabilities, youth and ~~the elderly~~older adults. Engagement should occur prior to and during a project's development, with the intent to provide direct benefits to, or solve, an expressed transportation issue, while also limiting and mitigating any negative impacts. Describe and map the location of any low-income populations, people of color, disabled populations, youth or ~~the elderly~~older adults within a ½ mile of the proposed project. Describe how these specific populations were engaged ~~and provided outreach to~~, whether through community planning efforts, project needs identification, or during the project development process. Describe what engagement methods and tools were used and how the input from these groups is reflected in the project's~~'~~ purpose and need and design. Elements of quality engagement include: outreach and engagement to specific communities and populations that are likely to be directly impacted by the project; techniques to reach out to populations traditionally not involved in community engagement related to transportation projects; feedback from these populations identifying potential positive and negative elements of the proposed project through engagement, study recommendations, or plans that provide feedback from populations that may be impacted by the proposed project. If relevant, describe how NEPA or Title VI regulations will guide engagement activities.

(Limit 1,400 characters; approximately 200 words):

2. **Sub-measure:** Equity Population Benefits and Impacts (0 to 30 points): A successful project is one that has been designed to provide direct benefits to low-income populations, people of color, persons with disabilities, youth and ~~the elderly~~older adults. All projects must mitigate potential negative benefits as required under federal law. Projects that are designed to provide benefits go beyond the mitigation requirement to proactively provide transportation benefits and solve transportation issues experienced by Equity populations.

   a. (0 to 30 points) Describe the project's benefits to low-income populations, people of color, children, people with disabilities, and ~~the elderly~~older adults. Benefits could relate to pedestrian and bicycle safety improvements; public health benefits; direct access improvements for residents or improved access to destinations such as jobs, school, health care or other; travel time improvements; gap closures; new transportation services or modal options, leveraging of other beneficial projects and investments; and/or community connection and cohesion improvements. Note that this is not an exhaustive list.

   (Limit 2,800 characters; approximately 400 words):

   b. (-10 to 0 points) Describe any negative impacts to low-income populations, people of color, children, people with disabilities, and ~~the elderly~~older adults created by the project, along with measures that will be taken to mitigate them. Negative impacts that are not adequately mitigated can result in a reduction in points.

   (Limit 2,800 characters; approximately 400 words):

   Below is a list of negative impacts. Note that this is not an exhaustive list.

   - Increased difficulty in street crossing caused by increased roadway width, increased traffic speed, wider turning radii, or other elements that negatively impact pedestrian access.
   - Increased noise.
   - Decreased pedestrian access through sidewalk removal / narrowing, placement of barriers along the walking path, increase in auto-oriented curb cuts, etc.
   - Project elements that are detrimental to location-based air quality by increasing stop/start activity at intersections, creating vehicle idling areas, directing an increased number of vehicles to a particular point, etc.
   - Increased speed and/or "cut-through" traffic.
   - Removed or diminished safe bicycle access.
   - Inclusion of some other barrier to access to jobs and other destinations.

- Displacement of residents and businesses.
- Mitigation of temporary construction/implementation impacts such as dust; noise; reduced access for travelers and to businesses; disruption of utilities; and eliminated street crossings.
- Other

3. **Sub-measure: Bonus Points (0 to 25 points)** Those projects that score at least 80% of the maximum total points available through sub-measures 1 and 2 will be awarded bonus points based on the geographic location of the project. These points will be assigned as follows, based on the highest-scoring geography the project contacts:
   ~~a. 25 points to projects within an Area of Concentrated Poverty with 50% or more people of color~~
   ~~b.~~a. ~~20~~ 25 points to projects within an Area of Concentrated Poverty
   ~~c.~~b.20~~15~~ points to projects within census tracts with the percent of population in poverty or population of color above the regional average percent
   ~~d.~~c. 10 points for all other areas

   Upload the "Socio-Economic Conditions" map used for this measure.

   **RESPONSE** (Select one, based on the "Socio-Economic Conditions" map):

   - ~~Project is located in an Area of Concentrated Poverty where 50% or more of residents are people of color (ACP50): ☐~~
   - Project is located in an Area of Concentrated Poverty: ☐
   - Project's census tracts are above the regional average for population in poverty or population of color: ☐
   - Project located in a census tract that is below the regional average for population in poverty or populations of color~~, or includes children, people with disabilities, or the elderly~~: ☐

**SCORING GUIDANCE** (50 Points)

Each application will be qualitatively scored based on the available points for each measure and will receive the number of points awarded. If the applicant receives at least 80% of the available points, i.e., 40 points for the Roadway applications, the project will receive Bonus points as described under sub-measure 3. If an applicant qualifies for Bonus points it will result in a Socio-Economic Equity score of more than the total points available.

B. **MEASURE**: Projects will be scored based on two housing measures: 1. the 2019 Housing Performance Score for the city or township in which the project is located (40 points) and 2. the project's connection to affordable housing (10 points) as described below.

**Part 1 (40 points): Housing Performance Score**

A city or township's housing performance score is calculated annually by the Metropolitan Council using data from four categories: new affordable or mixed-income housing completed in the last ten years; preservation projects completed in the last seven years and/or substantial rehabilitation projects completed in the last three years; housing program participation and production, and housing policies and ordinances; and characteristics of the existing housing stock. Data for the housing performance scores are updated each year by the Council, and the city or township is provided with an opportunity to review and revise the information.

Council staff will use the most current housing score for each city or township. If the project is located in more than one jurisdiction, the points will be awarded based on a weighted average using length or population of the project in each jurisdiction. For stand-alone intersection, bridge, underpass, and interchange projects, a one-mile radius-buffer will be drawn around the project. If the radius-buffer enters more than one jurisdiction, the points will be awarded based on the proportionate population of the Census blocks in each jurisdiction that are all or partially located in the area within the one-mile radius-buffer. If a project is located in a city or township with no allocation of affordable housing need (either there is no forecasted household growth or the area does not have land to support sewered development), the project will not be disadvantaged by this measure and the project's total score will be adjusted during scoring to remove this scoring measure.

**RESPONSE**: (NOTE: The below bullets vary slightly by funding category)

- City/Township: _____
- Total project cost: _____
- Length of Segment (For stand-alone projects, enter population from Regional Economy map) within each City/Township: _____
- Percent of total funds to be spent within City/Township: _____

**Part 2 (10 points): Affordable Housing Access**

This measure is a qualitative scoring measure. Describe and map any affordable housing developments— planned, under construction or existing, within ½ mile of the proposed project. The applicant should note the development stage, number of units, number of bedrooms per unit, and level of affordability using 2019 affordability limits. Also note whether the affordability is guaranteed through funding restrictions (i.e. LIHTC, 4d) or is unsubsidized, if housing choice vouchers are/will be accepted, and if there is a fair housing marketing plan required or in place.

Describe how the proposed project will improve or impact access for residents of the affordable housing locations within ½ mile of the project. This should include a description of improved access by all modes, automobiles, transit, bicycle and pedestrian access. Since residents of affordable housing are more likely not to own a private vehicle, higher points will be provided to roadway projects that include other multimodal access improvements.

**RESPONSE**:

(Limit 2,100 characters; approximately 300 words):

**SCORING GUIDANCE** (50 Points)

Part 1 (40 points): The applicant with the highest 2019 Housing Performance Score will receive the full points. Remaining projects will receive a proportionate share of the full points. For example, if the application being scored had a Housing Performance Score of 55 and the top project had a Housing Performance Score of 90, this applicant would receive (55/90)*40 points or 24 points.

Projects will use the city Housing Performance Score based on the project location. If a project is located in more than one jurisdiction, the points will be awarded based on a weighted average of the city or township scores for the project location based on the length of the project in each jurisdiction. For stand-alone roadway (intersection, bridge, underpass, and interchange) projects, a one-mile radius-buffer will be drawn around the project. If the radius-buffer enters more than one jurisdiction, the points

will be awarded based on the proportionate population of the Census blocks in each jurisdiction that are all or partially located in the area within the one-mile radius-buffer.

If a project is located in a city or township with no allocation of affordable housing need (either there is no forecasted household growth or the area does not have land to support sewered development), the project's total score will be adjusted as a result. If this is the case, the hold-harmless method will be used: the total points possible in the application will be 960 instead of 1,000. The total points awarded through the rest of the application (900 as a hypothetical example) will be divided by 960, then multiplied by 1,000. Therefore, a project scoring 900 out of 960, will equate to 938 points on a 1,000-point scale. If a portion of the project is located in a city with an affordable housing allocation and the other portion is located in a township with no affordable housing allocation, then a combination of the Housing Performance Score (or weighted average) and the hold-harmless method should be used. This will result in a total score that will be somewhere between 960 and 1,000; then the score will need to be adjusted to fit a 1,000-point scale. NOTE: Any community without a Housing Performance Score in 2018 will be awarded the better of its new score in 2020 and the above method. NOTE: in these cases, the raw points from Part 2 will be included in the 960-point total.

Part 2 (10 points): The project that best provides meaningful improvements to access to the affordable housing units will receive the full 10 points. Multiple projects may receive the highest possible score of 10 points based on this assessment. Remaining projects will receive a share of the full points at the scorer's discretion.

Final Score (50 points): The scores in Parts 1 and 2 will be totaled. If no application gets 50 points, the highest-scoring project will be awarded 50 points, with other projects adjusted proportionately.

Note: Metropolitan Council staff will score this measure.

## *4. Infrastructure Age/Condition (175 Points)*

This criterion will assess the age of the roadway facility being improved. Roadway improvement investments should focus on the higher needs of an aging facility, whereas, improvements to a recently reconstructed roadway does not display an efficient use of funds.

A. **MEASURE**: Identify the year of the roadway's original construction or most recent reconstruction. If the reconstruction date is used for the roadway, a full reconstruction must have been completed during the indicated year. Routine maintenance, such as an overlay or sealcoating project does not constitute a reconstruction and should not be used to determine the infrastructure age.

   If construction was completed over several years, enter the segment lengths for each year. The average age will be calculated.

   **RESPONSE**:

   - Year of original roadway construction or most recent reconstruction: _____
   - Location(s) used: _____

**SCORING GUIDANCE** (50 Points)

The applicant with the oldest roadway will receive full points. Remaining projects will receive a proportionate share of the full points. For example, if the application being scored was constructed 41 years ago and the oldest project was constructed 48 years ago, this applicant would receive (41/48)*50 points or 43 points.

Note: Because of the reporting of year of construction, it is possible for multiple projects to receive the full allotment of 50 points.

B. **MEASURE**: Select the geometric, structural, or infrastructure deficiencies listed below that will be improved as part of this project, as reflected in the project cost estimate. (125 Points)

   **RESPONSE** (Select all that apply. Please identify the proposed improvement):

- Improved roadway to better accommodate freight movements: ☐ 0-15 pts
  - *RESPONSE (Limit 700 characters; approximately 100 words):*
- Improved clear zones or sight lines: ☐ 0-10 pts
  - *RESPONSE (Limit 700 characters; approximately 100 words)*
- Improved roadway geometrics: ☐ 0-15 pts
  - *RESPONSE (Limit 700 characters; approximately 100 words)*
- Access management enhancements: ☐ 0-20 pts
  - *RESPONSE (Limit 700 characters; approximately 100 words)*
- Vertical/horizontal alignment improvements: ☐ 0-10 pts
  - *RESPONSE (Limit 700 characters; approximately 100 words)*
- Improved stormwater mitigation: ☐ 0-10 pts
  - *RESPONSE (Limit 700 characters; approximately 100 words)*
- Signals/lighting upgrades: ☐ 0-10 pts
  - *RESPONSE (Limit 700 characters; approximately 100 words)*
- Other Improvements: ☐ 0-10 pts

- *RESPONSE (Limit 700 characters; approximately 100 words)*

**SCORING GUIDANCE** (125 Points)

Within each improvement sub-measure, the answer most responsive to the need will receive full points (e.g., the top project that improves clear zones or sight lines will receive 10 points), with each remaining project receiving a share of the full points at the scorer's discretion. It is possible for more than one project to receive maximum points for a sub-measure.

The highest-scoring application for this measure will be adjusted to receive the full 125 points. Remaining projects will receive a proportionate share of the full points equal to the points for the project being scored divided by the points assigned to the highest-scoring project multiplied by the maximum points available for the measure (100). For example, if the application being scored had 25 points and the top project had 50 points, this applicant would receive (25/50)*125 points or 63 points.

## *5. Congestion Reduction/Air Quality (80 Points)*

This criterion measures the project's ability to reduce congestion. In addition, it will address its ability to improve congested intersections operating at unacceptable levels of service during peak hour conditions. The project will also be measured based on its ability to reduce emissions.

A. **MEASURE**: Conduct a capacity analysis at one or more of the intersections (or rail crossings) being improved by the roadway project using existing turning movement counts (collected within the last three years) in the weekday a.m. or p.m. peak hour and the Synchro or HCM software. The applicant must show the current total peak hour delay at one or more intersections (or rail crossings) and the reduction in total peak hour intersection delay at these intersections (or rail crossings) in seconds due to the project. If more than one intersection (or rail crossing) is examined, then the delay reduced by each intersection can be can added together to determine the total delay reduced by the project.

   - For roadway projects that include a railroad crossing, the applicant should conduct fieldwork during either the weekday a.m. or p.m. peak hour to determine the total peak hour delay reduced by the project. Applicants can also add together intersection delay reduced and railroad delay reduced, if they both will be improved by the project.
   - The applicant should include the appropriate Synchro or HCM full reports (including the Timing Page Report) that support the improvement in total peak hour delay and should conduct the analysis using the following:
   - Under the network settings, all defaults should be used for lanes, saturation flow rates, volumes, and simulation
   - Use Synchro's automatic optimization to determine cycle, offset and splits (for traffic signals). Use the setting when assessing delay both with and without the project. This methodology will ensure that all applicants start with their signal systems optimized when determining existing delay.
   - Project improvements assumed in the build condition should be reflected in the total project cost, such as additional through or turn lanes and protective left-turn phasing
   - Roadway lengths for intersection approaches must be the same length for before and after scenarios
   - An average weekday should be used for the existing conditions instead of a weekend, peak holiday, or special event time period that is not representative of the corridor for most of the year

Total Peak Hour Delay Reduced (Seconds) = Total Peak Hour Delay/Vehicle x Vehicles Per Hour

**RESPONSE**:

- Total Peak Hour Delay/Vehicle without the Project (Seconds/Vehicle):_____
- Total Peak Hour Delay/Vehicle with the Project (Seconds/Vehicle):_____
- Total Peak Hour Delay/Vehicle Reduced by the Project (Seconds/Vehicle):_____ (automatically calculated)
- Volume (Vehicles Per Hour): _____
- Total Peak Hour Delay Reduced by the Project (Seconds): _____ (automatically calculated)

**EXPLANATION** of methodology used to calculate railroad crossing delay, if applicable (Limit 1,400 characters; approximately 200 words):

SCORING GUIDANCE (50 Points)

The applicant with the most peak hour vehicle delay reduced by the project improvement will receive the full points for the measure. Remaining projects will receive a proportionate share of the points. For example, if the application being scored reduced delay by 5,000 seconds and the top project reduced delay by 25,000 seconds, this applicant would receive (5,000/25,000)*50 points, or 10 points.

B. **MEASURE**: Using the Synchro or HCM analysis completed in the previous measure, identify the total peak hour emissions reduction in kilograms (CO, NOX, VOC) due to the project. The applicant should include the appropriate Synchro or full HCM reports (including the Timing Page Report) that support the improvement in total peak hour emissions. If more than one intersection is examined, then the emissions reduced by each intersection can be can added together to determine the total emissions reduced by the project.

### Roadway projects that do not include railroad grade-separation elements:

- Total Peak Hour Emissions Reduced (Kilograms)= Total Peak Hour Emissions without the project – Total Peak Hour Emissions with the Project

**RESPONSE**:

- Total (CO, NOX, and VOC) Peak Hour Emissions without the Project (Kilograms):_____
- Total (CO, NOX, and VOC) Peak Hour Emissions with the Project (Kilograms):_____
- Total (CO, NOX, and VOC) Peak Hour Emissions Reduced by the Project (Kilograms):_____ (calculated online)

If more than one intersection is examined, the response should include a total of all emissions reduced.

### Roadway projects that include railroad grade-separation elements:

- For roadway projects that include a railroad crossing, the applicant needs to input four variables before and after the project to determine the change in emissions. Those variables include: speed, vehicle mile traveled, delay, and total vehicle stops. The applicant needs to conduct fieldwork during either the a.m. or p.m. peak hour to determine the existing

conditions and then detail any assumptions used for conditions after the project is built. The variables will be used in the exact same equation used within the software program (i.e., Synchro) required of the other project types. Therefore, the approach to calculate the kilograms emissions reduced for railroad grade-separation projects will be comparable to intersection improvement projects.

**RESPONSE**:

- Cruise speed in miles per hour without the project:_____ (Applicant inputs number)
- Vehicle miles traveled without the project:_____ (Applicant inputs number)
- Total delay in hours without the project:_____ (Applicant inputs number)
- Total stops in vehicles per hour without the project:_____ (Applicant inputs number)
- Cruise speed in miles per hour with the project:_____ (Applicant inputs number)
- Vehicle miles traveled with the project:_____ (Applicant inputs number)
- Total delay in hours with the project:_____ (Applicant inputs number)
- Total stops in vehicles per hour with the project:_____ (Applicant inputs number)
- Fuel consumption in gallons (F1)
- Fuel consumption in gallons (F2)
- Fuel consumption in gallons (F3)

Speed = cruise speed in miles per hour
Total Travel = vehicle miles traveled
Total Delay = total delay in hours
Stops = total stops in vehicles per hour

K1 = 0.075283-0.0015892 * Speed + 0.000015066 * Speed2
K2 = 0.7329
K3 = 0.0000061411 * Speed2

F1 (or F2 – without the project) = Fuel consumption in gallons

F1 = Total Travel * k1 + Total Delay * k2 + Stops * k3
F2 = Total Travel * k1 + Total Delay * k2 + Stops * k3

F3 = F1 – F2

CO = F3 * 0.0699 kg/gallon
NOX = F3 * 0.0136 kg/gallon
VOC = F3 * 0.0162 kg/gallon

Equation Automatically Provides Emissions Reduced:

- Total (CO, NOX, and VOC) Peak Hour Emissions Reduced by the Project (Kilograms): _____ (Online Calculation)

**EXPLANATION** of methodology and assumptions used (Limit 1,400 characters; approximately 200 words):

SCORING GUIDANCE (30 Points)

The applicant with the most kilograms reduced by the project improvement will receive the full points for the measure. Remaining projects will receive a proportionate share of the full. For example, if the application being scored reduced emissions by 3 kilograms and the top project reduced emissions by 5 kilograms, this applicant would receive (3/5)*30 points or 18 points.

## *6. Safety (180 Points)*

This criterion addresses the project's ability to correct deficiencies and improve the overall safety of a roadway facility. It will assess the project's monetized safety benefits.

A. **MEASURE**: Respond as appropriate to one of the two project types below. (175 Points)

**Roadway projects that do not include railroad grade-separation elements:**
Calculate the reduction in the total number of crashes due to improvements on the A-minor arterial or non-freeway principal arterial made by the project. The applicant must base the estimate of crash reduction on the methodology consistent with the latest Highway Safety Improvement Program (HSIP) application (*www.dot.state.mn.us/stateaid/trafficsafety.html*). Applicants should focus on the crash analysis for reactive projects.

Crash data must be obtained for the project length using the MnDOT TIS system average for calendar years ~~2016~~ 2018 through ~~2018~~2020. Crash data should include all crash types and severities, including pedestrian and bicycle crashes.

Applicants should request crash data from MnDOT as early as possible. The applicant must then attach a listing of the crashes reduced and the HSIP Benefit/Cost (B/C) worksheet (*www.dot.state.mn.us/stateaid/trafficsafety.html*) that identifies the resulting benefit associated with the project. As part of the response, please detail and attach the crash modification factor(s) used from FHWA's Crash Modification Factors Clearinghouse: *http://www.cmfclearinghouse.org/*. As part of the Regional Solicitation Before & After Study, Phase 2 (2021), a list of commonly used crash modification factors was created. Applicants have the option to use these crash modification factors (posted on the Metropolitan Council's Regional Solicitation website, under Application Resources) or find a more appropriate one on FHWA's Clearinghouse.

Commented [PS3]: New text

This measure requests the monetized safety benefit of the project. The cost of the project is scored in the Cost Effectiveness criterion.

**RESPONSE**:

- Crash Modification Factors Used (Limit 700 characters; approximately 100 words): _____
- Rationale for Crash Modifications Selected (Limit 1,400 characters; approximately 200 words): _____
- Project Benefit ($) from B/C ratio: _____
- Total Fatal (K) Crashes: _____
- Total Serious Injury (A) Crashes: _____
- Total Non-Motorized Fatal and Serious Injury Crashes: _____
- Total Crashes: _____
- Total Fatal (K) Crashes Reduced by Project: _____
- Total Serious Injury (A) Crashes Reduced by Project: _____
- Total Non-Motorized Fatal and Serious Injury Crashes Reduced by Project: _____
- Total Crashes Reduced by Project: _____

Upload Crash Modification Factors and B/C Worksheet.

**Roadway projects that include railroad grade-separation elements:**
Since the number of observed crashes at an existing at-grade railroad crossing is minor compared to an intersection, this measure will assess crash risk exposure that exists in order to compare projects. As a proactive safety measure, railroad grade-separation projects eliminate the crash risk exposure.

Crash Risk Exposure Eliminated = current average annual daily traffic volume x average number of daily trains at the at-grade crossing

**RESPONSE**:

- Current AADT volume:_____
- Average daily trains:_____
- Crash Risk Exposure eliminated:_____

**SCORING GUIDANCE** (175 Points)

This measure will be considered separately for projects that do and do not include a railroad grade-separation project. As a result, two projects (one without a railroad grade-separation project and one with a railroad grade-separation) may receive the full points.

For projects that do not include a grade-separation project, the applicant with the highest dollar value of benefits will receive the full points for the measure. Remaining projects will receive a proportionate share of the full points. For example, if the application being scored had safety benefits of $11,000,000 and the top project had safety benefits of $16,000,000, this applicant would receive (11,000,000/16,000,000)*175 points or 120 points.

For railroad grade-separation projects, the applicant with the highest crash risk exposure eliminated due to the project will receive the full points for the measure. Remaining projects will receive a proportionate share of the full points. For example, if the application being scored reduced 11,000 exposures and the top project reduced 16,000, this applicant would receive (11,000 /16,000)*175 points or 120 points.

B. **MEASURE**: Discuss how the project will improve safety for pedestrians. Safety countermeasures for pedestrians can include those identified by the FHWA as part of its *Safe Transportation for Every Pedestrian program* or others in its *Proven Safety Countermeasures* (e.g., pedestrian refuge islands, raised crosswalks, pedestrian hybrid beacons, leading pedestrian intervals). More information about pedestrian safety best practices is also available in MnDOT's *Best Practices for Pedestrian/Bicycle Safety*.

**SCORING GUIDANCE** (30 Points)

The project that will provide the most improvement to pedestrian safety will receive full points. Remaining projects will receive a share of the full points at the scorer's discretion.

**Commented [PS4]:** See information item for proposed new text, which would replace this content.

## *7. Multimodal Elements and Existing Connections (110 Points)*

This criterion measures how the project improves the travel experience, safety, and security for other modes of transportation and addresses the safe integration of these modes. The Transportation Policy Plan requires that explicit consideration of all users of the transportation system be considered in the planning and scoping phase of roadway projects.

A. **MEASURE**: Describe how the project positively affects the multimodal system.
   - Discuss any bicycle, pedestrian, or transit elements that are included as part of the project and how they improve the travel experience, safety, and security for users of these modes. Applicants should make sure that new multimodal elements described in the response are accounted for as part of the cost estimate form earlier in the application. Applicants should note if there is no transit service in the project area and identify supporting studies or plans that address why a mode may not be incorporated in the project (e.g., a bicycle system plan that locates bikeway facilities on a lower-volume parallel route).
   - Describe how the proposed multimodal improvements positively affect identified alignments in the Regional Bicycle Transportation Network (RBTN) or along a regional trail, if applicable.
   - Describe how the proposed multimodal improvements either provide a new, or improve an existing Major River Bicycle Barrier Crossing (MRBBC) as defined in the 2040 Transportation Policy Plan (TPP) or how they provide a new or improved crossing of a Regional Bicycle Barrier with respect to the tiered Regional Bicycle Barrier Crossing Improvement Areas as defined in the TPP and Technical Addendum to the Regional Bicycle Barriers Study (May 2019), if applicable.
   - Discuss the existing bicycle, pedestrian, and transit connections and how the project enhances these connections.
   - Discuss whether the project implements specific locations identified as being deficient in a completed ADA Transition Plan.

**RESPONSE** (Limit 2,800 characters; approximately 400 words):

**SCORING GUIDANCE** (110 Points)

The project that most positively affects the multimodal elements system will receive the full points. Remaining projects will receive a share of the full points at the scorer's discretion. The project score will be based on the quality of the improvements, as opposed to being based solely on the number of modes addressed. Points can be earned for incorporating multimodal project elements, positively affecting identified alignments in the Regional Bicycle Transportation Network (RBTN), regional trail, Major River Bicycle Barrier Crossing, or Regional Bicycle Barrier, or for making connections with existing multimodal systems or helping to implement an ADA Transition Plan. Projects do not need all of these elements to be awarded all of the points. Multimodal elements for rural roadway projects may include wider shoulders that will be used by bicyclists and pedestrians.

## *8. Risk Assessment (75 Points)*

This criterion measures the number of risks associated with successfully building the project. High-risk applications increase the likelihood that projects will withdraw at a later date. If this happens, the region is forced to reallocate the federal funds in a short amount of time or return them to the US Department of Transportation. These risks are outlined in the checklist in the required Risk Assessment.

A. **MEASURE**: Applications involving construction must complete the Risk Assessment. This checklist includes activities completed to-date, as well as an assessment of risks (e.g., right-of-way acquisition, proximity to historic properties, etc.).

**RESPONSE** (Complete Risk Assessment):

Please check those that apply and fill in anticipated completion dates for all projects~~, except for n~~New/expanded transit service projects will receive full credit for items 2-5 but must fill out item 1. ~~or t~~Transit vehicle purchases will receive full credit.

**1. Public Involvement (20 Percent of Points)**

Projects that have been through a public process with residents and other interested public entities are more likely than others to be successful. The project applicant must indicate that events and/or targeted outreach (e.g., surveys and other web-based input) were held to help identify the transportation problem, how the potential solution was selected instead of other options, and the public involvement completed to date on the project. The focus of this section is on the *opportunity for public input* as opposed to the quality of input. NOTE: A written response is required and failure to respond will result in zero points.

~~List Dates of most recent meetings and outreach specific to this project:~~

- ~~Meeting with general public: _____~~
- ~~Meeting with partner agencies: _____~~
- ~~Targeted online/mail outreach: _____~~
  - ~~Number of respondents: _____~~

100% ☐ Multiple types of targeted outreach efforts (such as meetings or online/mail outreach)~~Meetings~~ specific to this project with the general public and partner agencies have been used to help identify the project need.

~~75% ☐ Targeted outreach specific to this project with the general public and partner agencies have been used to help identify the project need.~~

50% ☐ At least one meeting specific to this project with the general public has been used to help identify the project need.

50% ☐ At least ~~one meeting~~ online/mail outreach effort specific to this project with the general public ~~key partner agencies~~ has been used to help identify the project need.

25% ☐ No meeting or outreach specific to the project was conducted, but the project was identified through meetings and/or outreach related to a larger planning effort.

0% ☐ No outreach has led to the selection of this project.

**RESPONSE** (Limit 2,800 characters; approximately 400 words). Describe the type(s) of outreach selected for this project (i.e., online or in-person meetings, surveys, demonstration projects), the method(s) used to announce outreach opportunities, and how many people participated. Include any public website links to outreach opportunities.~~:~~

**2. Layout (25 Percent of Points)**

Layout ~~should~~ includes proposed geometrics and existing and proposed right-of-way boundaries. A basic layout should include a base map (north arrow; scale; legend;* city and/or county limits; existing ROW, labeled; existing signals;* and bridge numbers*) and design data (proposed alignments; bike and/or roadway lane widths; shoulder width;* proposed signals;* and proposed ROW). An aerial photograph with a line showing the project's termini does not suffice and will be awarded zero points.

*If applicable

100% ☐ Layout approved by the applicant and all impacted jurisdictions (i.e., cities/counties/MnDOT ~~that the project goes through or agencies that maintain the roadway(s))~~. If a MnDOT trunk highway is impacted, approval by MnDOT must have occurred to receive full points. ~~-~~ **A PDF of the layout must be attached along with letters from each jurisdiction to receive points.**

100% ☐ A layout does not apply (signal replacement/signal timing, stand-alone streetscaping, minor intersection improvements). Applicants that are not certain whether a layout is required should contact Colleen Brown at MnDOT Metro State Aid – colleen.brown@state.mn.us.

50% ☐ Layout completed but not approved by all jurisdictions. **A PDF of the layout must be attached to receive points.**

25% ☐ Layout has been started but is not complete. **A PDF of the layout must be attached to receive points.**

0% ☐ Layout has not been started

~~3. Anticipated date or date of completion: _____~~

**~~4.~~3. Review of Section 106 Historic Resources (15 Percent of Points)**

100% ☐ No known historic properties eligible for or listed in the National Register of Historic Places are located in the project area, and project is not located on an identified historic bridge

100% ☐ There are historical/archeological properties present but determination of "no historic properties affected" is anticipated.

80% ☐ Historic/archeological property impacted; determination of "no adverse effect" anticipated

40% ☐ Historic/archeological property impacted; determination of "adverse effect" anticipated

0% ☐ Unsure if there are any historic/archaeological properties in the project area.

Project is located on an identified historic bridge: ☐

**~~5.~~4. Right-of-Way (25 Percent of Points)**

100% ☐ Right-of-way, permanent or temporary easements, and MnDOT agreement/limited-use permit either not required or all have been acquired

50% ☐ Right-of-way, permanent or temporary easements, and/or MnDOT agreement/limited-use permit required~~,~~ - plat, legal descriptions, or official map complete

25% ☐ Right-of-way, permanent or temporary easements, and/or MnDOT agreement/limited-use permit required~~,~~ - parcels identified

0% ☐ Right-of-way, permanent or temporary easements, and/or MnDOT agreement/limited-use permit required~~,~~ – parcels not all identified

~~Anticipated date or date of acquisition _____~~

**~~6.~~5. Railroad Involvement (15 Percent of Points)**

100% ☐ No railroad involvement on project or railroad Right-of-Way agreement is executed (include signature page, if applicable)

50% ☐ Railroad Right-of-Way Agreement required; negotiations have begun

0% ☐ Railroad Right-of-Way Agreement required; negotiations have not begun.

Anticipated date or date of executed Agreement _____

SCORING GUIDANCE (75 Points)

The applicant with the most points on the Risk Assessment (more points equate to less project risk) will receive the full points for the measure. Remaining projects will receive a proportionate share of the full points. For example, if the application being scored had 40 points and the top project had 70 points, this applicant would receive (40/70)*75 points or 43 points.

## *9. Cost Effectiveness (100 Points)*

This criterion will assess the project's cost effectiveness based on the total TAB-eligible project cost (not including noise walls) and total points awarded in the previous criteria.

A. **MEASURE**: This measure will calculate the cost effectiveness of the project. Metropolitan Council staff will divide the number of points awarded in the previous criteria by the TAB-eligible project cost (not including noise walls). If a project has been awarded other outside, competitive funding (e.g., state bonding, Transportation Economic Development Program, Minnesota Highway Freight Program), project sponsors may reduce the total project cost for the purposes of this scoring measure by the amount of the outside funding award.

- Cost- effectiveness = total number of points awarded in previous criteria/total TAB-eligible project cost

**RESPONSE** (This measure will be calculated after the scores for the other measures are tabulated by the Scoring Committee):

- Total Project Cost (entered in Project Cost Form):_____ (automatically calculated)
- Enter amount of Noise Walls: _____
- Enter amount of any outside, competitive funding (attach documentation of award): _____
- Points Awarded in Previous Criteria: ____ (entered by Metropolitan Council staff)

**SCORING GUIDANCE** (100 Points)

The applicant with the most points (i.e., the benefits) per dollar will receive the full points for the measure. Remaining projects will receive a proportionate share of the full points. For example, if the top project received .0005 points per dollar and the application being scored received .00025 points per dollar, this applicant would receive (.0005/.00025) *100 points for 50 points.

The scorer for this measure will also complete a reasonableness check of the total project cost that is used for this measure. The scorer may follow up with the applicant to clarify any questions. Up to 50 percent of points awarded for this measure can be deducted if the scorer does not believe that the cost estimate is reasonable.

**TOTAL: 1,100 POINTS**

# Bridges

**Prioritizing Criteria and Measures**

**September 15, 2021**

**Definition:** A bridge rehabilitation or replacement project located on a non-freeway principal arterial or A-minor arterial functionally classified roadway, consistent with the latest TAB-approved functional classification map. Bridge structures that have a separate span for each direction of travel can apply for both spans as part of one application.

The bridge must carry vehicular traffic but may also include accommodations for other modes. Bridges that are **exclusively** for bicycle or pedestrian traffic must apply under one of the Bicycle and Pedestrian Facilities application categories. Rail-only bridges are not eligible for funding. Completely new bridges, interchanges, or overpasses should apply in the Roadway Expansion application category.

## Examples of Bridge Rehabilitation/Replacement Projects:

- Bridge rehabilitation of 20 or more feet with a National Bridge Inventory Condition rating of 6 or less.
- Bridge replacement of 20 or more feet with a National Bridge Inventory Condition rating of 4 or less.

## Scoring:

| Criteria and Measures | Points | % of Total Points |
|---|---|---|
| **1. Role in the Regional Transportation System and Economy** | **195** | **18%** |
| Measure A - Distance to the nearest parallel bridge | 100 | |
| Measure B - Connection to Total Jobs, Manufacturing/Distribution Jobs, and post-secondary students | 30 | |
| Measure C - Regional Truck Corridor Study tiers | 65 | |
| **2. Usage** | **130** | **12%** |
| Measure A - Current daily person throughput | 100 | |
| Measure B - Forecast 2040 average daily traffic volume | 30 | |
| **3. Equity and Housing Performance** | **100** | **9%** |
| Measure A - Benefits and outreach to disadvantaged populations | 50 | |
| Measure B - Housing Performance Score/ affordable housing connection | 50 | |
| **4. Infrastructure Condition** | **400** | **36%** |
| Measure A – National Bridge Inventory Condition Rating | 300 | |
| Measure B – Load-Posting | 100 | |
| **5. Multimodal Elements and Existing Connections** | **100** | **9%** |
| Measure A - Transit, bicycle, or pedestrian project elements & connections | 100 | |
| **6. Risk Assessment** | **75** | **7%** |
| Measure A - Risk Assessment Form | 75 | |

| Criteria and Measures | Points | % of Total Points |
|---|---|---|
| **7. Cost Effectiveness** | **100** | **9%** |
| Measure A - Cost effectiveness (total points awarded/total project cost) | 100 | |
| **Total** | **1,100** | |

## *Role in the Regional Transportation System and Economy (195 Points)*

Tying regional policy (Thrive MSP2040) to the Regional Solicitation, this criterion measures the project's ability to serve a transportation purpose within the regional transportation system and economy based on how well it fulfills its functional classification role, connects to employment, post-secondary students, and manufacturing/distribution-related employment, and aligns with the Regional Truck Corridor Study tiers.

A. **MEASURE**: Address how the project route fulfills its role in the regional transportation system by measuring the diversion to the nearest parallel crossing (must be an A-minor arterial or principal arterial) if the proposed project is closed. The project itself must be located on a non-freeway principal arterial or an A-minor arterial.

**RESPONSE**:

- Location of nearest parallel crossing:_____
- Explanation *(Limit 2,800 characters; approximately 400 words)*: _____
- Distance from one end of proposed project to nearest parallel crossing (that is an A-minor arterial or principal arterial) and then back to the other side of the proposed project using non-local functionally-classified roadways:_____ (calculated by Council Staff)

SCORING GUIDANCE (100 Points)

The applicant with the furthest distance from the closest parallel A-minor arterial or principal arterial bridge will receive the full points. Remaining projects will receive a proportionate share of the full points. For example, if the project being scored had a distance of 8 miles and the top project was had a distance of 10 miles, this applicant would receive (8/10)*100 points or 80 points.

B. **MEASURE**: Reference the "Regional Economy" map generated at the beginning of the application process. Report the employment, manufacturing/distribution-related employment, and post-secondary students enrolled within one mile, as depicted on the "Regional Economy" map.

**RESPONSE**: (Data from the "Regional Economy" map):

- Existing Employment within 1 Mile:_____(Maximum of 30 points)
- Existing Manufacturing/Distribution-Related Employment within 1 Mile:_____ (Maximum of 30 points)
- Existing Post-Secondary Students within 1 Mile: _____(Maximum of 18 points)

Upload the "Regional Economy" map used for this measure.

**SCORING GUIDANCE** (30 Points)

All Census block groups that are included within or intersect the buffer area around the project will be included.

The applicant with the highest existing total employment will receive the full points. Remaining projects will receive a proportionate share of the full points. For example, if the application being scored had 1,000 workers within one mile and the top project had 1,500 workers, this applicant would receive (1,000/1,500)*30 points or 20 points.

The applicant with the highest existing manufacturing/distribution-related employment will receive the full points. Remaining projects will receive a proportionate share of the full points equal to the existing manufacturing/distribution-related employment within one mile of the project being scored divided by the project with the highest manufacturing/distribution-related employment within one mile multiplied by the maximum points available for the measure (20). For example, if the application being scored had 1,000 manufacturing/distribution-related workers within one mile and the top project had 1,500 manufacturing/distribution-related workers, this applicant would receive (1,000/1,500)*30 points or 20 points.

The applicant with the highest number of post-secondary students will receive 18 points. Remaining projects will receive a proportionate share of the 18 points. For example, if the application being scored had 1,000 students within one mile and the top project had 1,500 students, this applicant would receive (1,000/1,500)*18 points or 12 points.

The scorer will assess if the applicant would score highest with the total employment part of the measure, the manufacturing/distribution employment part of the measure, or the education part of the measure and give the applicant the highest of the three scores out of a maximum of 30 points.

Note: Due to the use of multiple sub-measures, two applicants can receive the full 30 points.

C. MEASURE: This measure relies on the results in the Regional Truck Corridor Study, which prioritized all principal and minor arterials based on truck volume, truck percentage of total traffic, proximity to freight industry clusters, and proximity to regional freight terminals. The truck corridors were grouped into tiers 1, 2, and 3, in order of priority. Use the 2021 Updated Regional Truck Corridors tiers to respond to this measure: *2021 Updated Regional Truck Corridors.* (65 points)

~~Use the final study report for this measure~~:

**RESPONSE** (Select one for your project, based on the updated 2021 Regional Truck Corridors ~~Study~~):

- Along Tier 1: ☐ Miles (to the nearest 0.1 miles): (65 points)
- Along Tier 2: ☐ Miles (to the nearest 0.1 miles): (55 points)
- Along Tier 3: ☐ Miles (to the nearest 0.1 miles) (45 points)
- ~~The project is located on either a Tier 1, Tier 2, or Tier 3 corridor: ☐ (65 Points) Miles (to the nearest 0.1 miles) : _____~~

**Commented [PS1]:** New text.

- The project provides a direct and immediate connection (i.e., intersects) with either a Tier 1, Tier 2, or Tier 3 corridor: ☐ (10 Points)
- The project is not located on a Tier 1, Tier 2, or Tier 3 corridor: ☐ (0 Points)

SCORING GUIDANCE (65 Points)

The scorer will assign points based on which of the scores applies.

If no applicant is along Tier 1, the top-scoring application(s) will be adjusted to 65 points, with the others adjusted proportionately.

Note that multiple applicants can score the maximum point allotment.

## *2. Usage (130 Points)*

This criterion quantifies the project's potential impact by measuring the current daily person throughput and future vehicular traffic that will be served by the project. These roadway users directly benefit from the project improvements on the A-minor arterial or non-freeway principal arterial.

A. **MEASURE**: Metropolitan Council staff will calculate the current daily person throughput at one location on the A-minor arterial or non-freeway principal arterial bridge using the current average annual daily traffic (AADT) volume and average annual ridership. The applicant must identify the location along the project length and provide the current AADT volume from the *MnDOT 50-series maps* (select Twin Cities Metro Area Street Series under Traffic Volume (AADT)). Due to the potential timing issues with when a traffic count was taken relative to the COVID-19 pandemic (and resulting drop in traffic volumes), applicants may also use a historic AADT volume or take their own count, assuming the methodology is consistent with MnDOT's methodology. Reference the "Transit Connections" map for transit routes along the project. Ridership data will be provided by the Metropolitan Council staff, if public transit is currently provided on the project length.

Commented [PS2]: New text

   - Current Daily Person Throughput = (current average annual daily traffic volume x 1.30 vehicle occupancy) + average annual daily transit ridership (2019)

   **RESPONSE**:

   - Location:_____
   - Current AADT volume:_____
   - Existing Transit Routes on the Project:_____
   - Upload the "Transit Connections" map.

SCORING GUIDANCE (100 Points)

The applicant with highest current daily person throughput will receive the full points for the measure. Remaining projects will receive a proportionate share of the full. For example, if the application being scored had a daily person throughput of 1,000 people and the top project had a daily person throughput of 1,500 people, this applicant would receive (1,000/1,500)*100 points or 67 points.

B. **MEASURE**: Provide the forecast (2040) average daily traffic volume at the same location on the A-minor arterial or non-freeway principal arterial bridge, as identified in the previous measure. The applicant may choose to use a county or city travel demand model based on the

Metropolitan Council model to identify the forecast (2040) average daily traffic volume or have Metropolitan Council staff determine the forecast volume using the Metropolitan Council model and project location. Respond as appropriate to the use of one type of forecast model. (30 points)

**RESPONSE**:

- Use Metropolitan Council model to determine forecast (2040) ADT volume ☐
- METC Staff-Forecast (2040) ADT volume ☐

OR

**RESPONSE**:

- Identify the approved county or city travel demand model to determine forecast (2040) ADT volume☐
- Forecast (2040) ADT volume : _____

**SCORING GUIDANCE** (30 Points)

The applicant with the highest forecast (2040) ADT volume will receive the full points for the measure. Remaining projects will receive a proportionate share of the full points. For example, if the application being scored had a daily forecast of 28,000 vehicles and the top project had a daily forecast of 32,000 vehicles, this applicant would receive (28,000/32,000)*30 points or 26 points.

## *3. Equity and Housing Performance (100 Points)*

This criterion addresses the *Council's role in advancing equity* by examining how a project directly provides benefits to, or impacts (positive and negative) low-income populations, people of color, people with disabilities, youth and ~~the elderly~~older adults. The criterion evaluates whether the applicant engaged these populations to identify transportation needs and potential solutions and how the project will address these identified needs. The criterion also evaluates a community's overall efforts to implement affordable housing and how the project improves multimodal access to affordable housing residents.

A. **MEASURE**: Socio-Economic Equity

1. **Sub-measure**: Equity Population Engagement (0 to 20 points): A successful project is one that is the result of active engagement of low-income populations, people of color, persons with disabilities, youth and ~~the elderly~~older adults. Engagement should occur prior to and during a project's development, with the intent to provide direct benefits to, or solve, an expressed transportation issue, while also limiting and mitigating any negative impacts. Describe and map the location of any low-income populations, people of color, disabled populations, youth or ~~the elderly~~older adults within a ½ mile of the proposed project. Describe how these specific populations were engaged and ~~provided outreach to~~, whether through community planning efforts, project needs identification, or during the project development process. Describe what engagement methods and tools were used and how the input from these groups is reflected in the project's~~'~~ purpose and need and design. Elements of quality engagement include: outreach and engagement to specific communities and populations that are likely to be directly impacted by the project; techniques to reach out to populations traditionally not involved in community engagement related to transportation projects; feedback from these populations identifying potential positive and negative elements of the proposed project through engagement, study

recommendations, or plans that provide feedback from populations that may be impacted by the proposed project. If relevant, describe how NEPA or Title VI regulations will guide engagement activities.

(Limit 1,400 characters; approximately 200 words):

2. **Sub-measure:** Equity Population Benefits and Impacts (0 to 30 points): A successful project is one that has been designed to provide direct benefits to low-income populations, people of color, persons with disabilities, youth and ~~the elderly~~older adults. All projects must mitigate potential negative benefits as required under federal law. Projects that are designed to provide benefits go beyond the mitigation requirement to proactively provide transportation benefits and solve transportation issues experienced by Equity populations.

   a. (0 to 30 points) Describe the project's benefits to low-income populations, people of color, children, people with disabilities, and ~~the elderly~~older adults. Benefits could relate to pedestrian and bicycle safety improvements; public health benefits; direct access improvements for residents or improved access to destinations such as jobs, school, health care or other; travel time improvements; gap closures; new transportation services or modal options, leveraging of other beneficial projects and investments; and/or community connection and cohesion improvements. Note that this is not an exhaustive list.

   (Limit 2,800 characters; approximately 400 words):

   b. (-10 to 0 points) Describe any negative impacts to low-income populations, people of color, children, people with disabilities, and ~~the elderly~~older adults created by the project, along with measures that will be taken to mitigate them. Negative impacts that are not adequately mitigated can result in a reduction in points.

   (Limit 2,800 characters; approximately 400 words):

   Below is a list of negative impacts. Note that this is not an exhaustive list.

   - Increased difficulty in street crossing caused by increased roadway width, increased traffic speed, wider turning radii, or other elements that negatively impact pedestrian access.
   - Increased noise.
   - Decreased pedestrian access through sidewalk removal / narrowing, placement of barriers along the walking path, increase in auto-oriented curb cuts, etc.

- Project elements that are detrimental to location-based air quality by increasing stop/start activity at intersections, creating vehicle idling areas, directing an increased number of vehicles to a particular point, etc.
- Increased speed and/or "cut-through" traffic.
- Removed or diminished safe bicycle access.
- Inclusion of some other barrier to access to jobs and other destinations.
- Displacement of residents and businesses.
- Mitigation of temporary construction/implementation impacts such as dust; noise; reduced access for travelers and to businesses; disruption of utilities; and eliminated street crossings.
- Other

3. **Sub-measure: Bonus Points (0 to 25 points)** Those projects that score at least 80% of the maximum total points available through sub-measures 1 and 2 will be awarded bonus points based on the geographic location of the project. These points will be assigned as follows, based on the highest-scoring geography the project contacts:
   ~~a. 25 points to projects within an Area of Concentrated Poverty with 50% or more people of color~~
   ~~b.~~a. ~~20~~ 25 points to projects within an Area of Concentrated Poverty
   ~~c.~~b. ~~15~~ 20 points to projects within census tracts with the percent of population in poverty or population of color above the regional average percent
   ~~d.~~c. 10 points for all other areas

   Upload the "Socio-Economic Conditions" map used for this measure.

   **RESPONSE** (Select one, based on the "Socio-Economic Conditions" map):

   - ~~Project is located in an Area of Concentrated Poverty where 50% or more of residents are people of color (ACP50): ☐~~
   - Project is located in an Area of Concentrated Poverty: ☐
   - Project's census tracts are above the regional average for population in poverty or population of color: ☐
   - Project located in a census tract that is below the regional average for population in poverty or populations of color~~, or includes children, people with disabilities, or the elderly~~: ☐

**SCORING GUIDANCE** (50 Points)

Each application will be qualitatively scored based on the available points for each measure and will receive the number of points awarded. If the applicant receives at least 80% of the available points, i.e., 40 points for the Roadway applications, the project will receive Bonus points as described under sub-measure 3. If an applicant qualifies for Bonus points it will result in a Socio-Economic Equity score of more than the total points available.

B. **MEASURE**: Projects will be scored based on two housing measures: 1. the 2019 Housing Performance Score for the city or township in which the project is located (40 points) and 2. the project's connection to affordable housing (10 points) as described below.

**Part 1 (40 points): Housing Performance Score**

A city or township's housing performance score is calculated annually by the Metropolitan Council using data from four categories: new affordable or mixed-income housing completed in the last ten years; preservation projects completed in the last seven years and/or substantial rehabilitation projects completed in the last three years; housing program participation and production, and housing policies and ordinances; and characteristics of the existing housing stock. Data for the housing performance scores are updated each year by the Council, and the city or township is provided with an opportunity to review and revise the information

Council staff will use the most current housing score for each city or township. If the project is located in more than one jurisdiction, the points will be awarded based on a weighted average using length or population of the project in each jurisdiction. For stand-alone intersection, bridge, underpass, and interchange projects, a one-mile radius-buffer will be drawn around the project. If the radius-buffer enters more than one jurisdiction, the points will be awarded based on the proportionate population of the Census blocks in each jurisdiction that are all or partially located in the area within the one-mile radius-buffer. If a project is located in a city or township with no allocation of affordable housing need (either there is no forecasted household growth or the area does not have land to support sewered development), the project will not be disadvantaged by this measure and the project's total score will be adjusted during scoring to remove this scoring measure.

**RESPONSE**:

- City/Township: _____
- Length of Segment (For stand-alone projects, enter population from Regional Economy map) within each City/Township: _____
- Percent of segments within each City/Township: _____

**Part 2 (10 points): Affordable Housing Access**

This measure is a qualitative scoring measure. Describe and map any affordable housing developments— planned, under construction or existing, within ½ mile of the proposed project. The applicant should note the development stage, number of units, number of bedrooms per unit, and level of affordability using 2019 affordability limits. Also note whether the affordability is guaranteed through funding restrictions (i.e. LIHTC, 4d) or is unsubsidized, if housing choice vouchers are/will be accepted, and if there is a fair housing marketing plan required or in place.

Describe how the proposed project will improve or impact access for residents of the affordable housing locations within ½ mile of the project. This should include a description of improved access by all modes, automobiles, transit, bicycle and pedestrian access. Since residents of affordable housing are more likely not to own a private vehicle, higher points will be provided to roadway projects that include other multimodal access improvements.

**RESPONSE**:

(Limit 2,100 characters; approximately 300 words):

**SCORING GUIDANCE** (50 Points)

Part 1 (40 points): The applicant with the highest 2019 Housing Performance Score will receive the full points. Remaining projects will receive a proportionate share of the full points. For example, if the application being scored had a Housing Performance Score of 55 and the top project had a Housing

Performance Score of 90, this applicant would receive (55/90)*40 points or 24 points.

Projects will use the city Housing Performance Score based on the project location. If a project is located in more than one jurisdiction, the points will be awarded based on a weighted average of the city or township scores for the project location based on the length of the project in each jurisdiction. For stand-alone roadway (intersection, bridge, underpass, and interchange) projects, a one-mile radius-buffer will be drawn around the project. If the radius-buffer enters more than one jurisdiction, the points will be awarded based on the proportionate population of the Census blocks in each jurisdiction that are all or partially located in the area within the one-mile radius-buffer.

If a project is located in a city or township with no allocation of affordable housing need (either there is no forecasted household growth or the area does not have land to support sewered development), the project's total score will be adjusted as a result. If this is the case, the hold-harmless method will be used: the total points possible in the application will be 960 instead of 1,000. The total points awarded through the rest of the application (900 as a hypothetical example) will be divided by 960, then multiplied by 1,000. Therefore, a project scoring 900 out of 960, will equate to 938 points on a 1,000-point scale. If a portion of the project is located in a city with an affordable housing allocation and the other portion is located in a township with no affordable housing allocation, then a combination of the Housing Performance Score (or weighted average) and the hold-harmless method should be used. This will result in a total score that will be somewhere between 960 and 1,000; then the score will need to be adjusted to fit a 1,000-point scale. NOTE: Any community without a Housing Performance Score in 2018 will be awarded the better of its new score in 2020 and the above method. NOTE: in these cases, the raw points from Part 2 will be included in the 960-point total.

Part 2 (10 points): The project that best provides meaningful improvements to access to the affordable housing units will receive the full 10 points. Multiple projects may receive the highest possible score of 10 points based on this assessment. Remaining projects will receive a share of the full points at the scorer's discretion.

Final Score (50 points): The scores in Parts 1 and 2 will be totaled. If no application gets 50 points, the highest-scoring project will be awarded 50 points, with other projects adjusted proportionately.

Note: Metropolitan Council staff will score this measure.

## *4. Infrastructure Condition (400 Points)*

This criterion will assess the age and condition of the bridge facility being improved. Bridge improvement investments should focus on the higher needs of unsafe facilities. If there are two separate spans, then the applicant should take the average bridge inventory condition rating of the two spans.

A. **MEASURE**: Identify the lowest National Bridge Inventory condition rating among Deck, Superstructure, and Substructure from the most recent Structure Inventory Report. Attach the report to the application.

   **RESPONSE**:

   - Lowest National Bridge Inventory Condition Rating: ____
     - Deck Rating: _____
     - Superstructure Rating: _____
     - Substructure Rating: _____

- Channel Rating: _____
- Culvert Rating: _____

Upload Structure Inventory Report.

**SCORING GUIDANCE** (300 Points)

The lowest National Bridge Inventory (NBI) Condition Rating among Deck, Superstructure, and Substructure will be used as the NBI rating. The ratings will be scored as follows:

Rating of 3 or lower: 300 points
Rating of 4: 250 points
Rating of 5: 150 points
Rating of 6: 100 points

B. **MEASURE**: Identify whether the bridge is posted for load restrictions.

**RESPONSE**: (Check box if the bridge is load-posted):

- Load-Posted (Check box if the bridge is load-posted): ☐

**SCORING GUIDANCE** (100 Points)

Applicants will receive the points shown depending on whether the bridge is load-posted. The applicant can only score 0 or 100 points for this measure.

## *5. Multimodal Elements and Connections (100 Points)*

This criterion measures how the project improves the travel experience, safety, and security for other modes of transportation and addresses the safe integration of these modes. The Transportation Policy Plan requires that explicit consideration of all users of the transportation system be considered in the planning and scoping phase of roadway projects.

A. **MEASURE**: Describe how the project positively affects the multimodal system.

- Discuss any bicycle, pedestrian, or transit elements that are included as part of the project and how they improve the travel experience, safety, and security for users of these modes. Applicants should make sure that new multimodal elements described in the response are accounted for as part of the cost estimate form earlier in the application. Applicants should note if there is no transit service in the project area and identify supporting studies or plans that address why a mode may not be incorporated in the project (e.g., a bicycle system plan that locates bikeway facilities on a lower-volume parallel route).
- Describe how the proposed multimodal improvements positively affect identified alignments in the Regional Bicycle Transportation Network (RBTN) or along a regional trail, if applicable.
- Describe how the proposed multimodal improvements either provide a new, or improve an existing Major River Bicycle Barrier Crossing (MRBBC) as defined in the 2040 Transportation Policy Plan (TPP) or how they provide a new or improved crossing of a Regional Bicycle Barrier with respect to the tiered Regional Bicycle Barrier Crossing

Improvement Areas as defined in the TPP and Technical Addendum to the Regional Bicycle Barriers Study (May 2019), if applicable.

- Discuss the existing bicycle, pedestrian, and transit connections and how the project enhances these connections.
- Discuss whether the project implements specific locations identified as being deficient in a completed ADA Transition Plan.

**RESPONSE**: (Limit 2,800 characters; approximately 400 words):

**SCORING GUIDANCE** (100 Points)

The project that most positively affects the multimodal will receive the full points. Remaining projects will receive a share of the full points at the scorer's discretion. The project score will be based on the quality of the improvements, as opposed to being based solely on the number of modes addressed. Points can be earned for incorporating multimodal project elements, positively affecting identified alignments in the Regional Bicycle Transportation Network (RBTN), regional trail, Major River Bicycle Barrier Crossing, or Regional Bicycle Barrier, or for making connections with existing multimodal systems, or helping to implement an ADA Transition Plan. Projects do not need all of these elements to be awarded all of the points. Multimodal elements for rural roadway projects may include wider shoulders that will be used by bicyclists and pedestrians.

## *6. Risk Assessment (75 Points)*

This criterion measures the number of risks associated with successfully building the project. High-risk applications increase the likelihood that projects will withdraw at a later date. If this happens, the region is forced to reallocate the federal funds in a short amount of time or return them to the US Department of Transportation. These risks are outlined in the checklist in the required Risk Assessment.

A. **MEASURE**: Applications involving construction must complete the Risk Assessment. This checklist includes activities completed to-date, as well as an assessment of risks (e.g., right-of-way acquisition, proximity to historic properties, etc.).

**RESPONSE**: (Complete Risk Assessment):

Please check those that apply and fill in anticipated completion dates for all projects~~,~~ ~~except for a~~New/expanded transit service projects will receive full credit for items 2-5 but must fill out item 1. ~~or t~~Transit vehicle purchases will receive full credit.

1. **Public Involvement (20 Percent of Points)**

   Projects that have been through a public process with residents and other interested public entities are more likely than others to be successful. The project applicant must indicate that events and/or targeted outreach (e.g., surveys and other web-based input) were held to help identify the transportation problem, how the potential solution was selected instead of other options, and the public involvement completed to date on the project. The focus of this section is on the *opportunity for public input* as opposed to the quality of input. NOTE: A written response is required and failure to respond will result in zero points.

   ~~List Dates of most recent meetings and outreach specific to this project:~~

- ~~Meeting with general public: _____~~
- ~~Meeting with partner agencies: _____~~
- ~~Targeted online/mail outreach: _____~~
  - ~~Number of respondents: _____~~

100% ☐ Multiple types of targeted outreach efforts (such as meetings or online/mail outreach)~~Meetings~~ specific to this project with the general public and partner agencies have been used to help identify the project need.

~~75% ☐ Targeted outreach specific to this project with the general public and partner agencies have been used to help identify the project need.~~

50% ☐ At least one meeting specific to this project with the general public has been used to help identify the project need.

50% ☐ At least ~~one meeting~~ online/mail outreach effort specific to this project with the general public ~~key partner agencies~~ has been used to help identify the project need.

25% ☐ No meeting or outreach specific to the project was conducted, but the project was identified through meetings and/or outreach related to a larger planning effort.

0% ☐ No outreach has led to the selection of this project.

**RESPONSE** (Limit 2,800 characters; approximately 400 words). Describe the type(s) of outreach selected for this project (i.e., online or in-person meetings, surveys, demonstration projects), the method(s) used to announce outreach opportunities, and how many people participated. Include any public website links to outreach opportunities.~~:~~

**2. Layout (25 Percent of Points)**

Layout ~~should~~ includes proposed geometrics and existing and proposed right-of-way boundaries. A basic layout should include a base map (north arrow; scale; legend;* city and/or county limits; existing ROW, labeled; existing signals;* and bridge numbers*) and design data (proposed alignments; bike and/or roadway lane widths; shoulder width;* proposed signals;* and proposed ROW). An aerial photograph with a line showing the project's termini does not suffice and will be awarded zero points.

*If applicable

100% ☐ Layout approved by the applicant and all impacted jurisdictions (i.e., cities/counties/MnDOT ~~that the project goes through or agencies that maintain the roadway(s))~~. If a MnDOT trunk highway is impacted, approval by MnDOT must have occurred to receive full points.~~ **A PDF of the layout must be attached along with letters from each jurisdiction to receive points.**

100% ☐ A layout does not apply (signal replacement/signal timing, stand-alone streetscaping, minor intersection improvements). Applicants that are not certain whether a layout is required should contact Colleen Brown at MnDOT Metro State Aid – colleen.brown@state.mn.us.

50% ☐ Layout completed but not approved by all jurisdictions. **A PDF of the layout must be attached to receive points.**

25% ☐ Layout has been started but is not complete. **A PDF of the layout must be attached to receive points.**

0% ☐ Layout has not been started

~~3. Anticipated date or date of completion: _____~~

**~~4.~~3. Review of Section 106 Historic Resources (15 Percent of Points)**

100% ☐ No known historic properties eligible for or listed in the National Register of Historic Places are located in the project area, and project is not located on an identified historic bridge

100% ☐ There are historical/archeological properties present but determination of "no historic properties affected" is anticipated.

80% ☐ Historic/archeological property impacted; determination of "no adverse effect" anticipated

40% ☐ Historic/archeological property impacted; determination of "adverse effect" anticipated

0% ☐ Unsure if there are any historic/archaeological properties in the project area.

Project is located on an identified historic bridge: ☐

**~~5.~~4. Right-of-Way (25 Percent of Points)**

100% ☐ Right-of-way, permanent or temporary easements, and MnDOT agreement/limited-use permit either not required or all have been acquired

50% ☐ Right-of-way, permanent or temporary easements, and/or MnDOT agreement/limited-use permit required~~,~~ - plat, legal descriptions, or official map complete

25% ☐ Right-of-way, permanent or temporary easements, and/or MnDOT agreement/limited-use permit required~~,~~ - parcels identified

0% ☐ Right-of-way, permanent or temporary easements, and/or MnDOT agreement/limited-use permit required~~,~~ – parcels not all identified

~~Anticipated date or date of acquisition _____~~

**~~6.~~5. Railroad Involvement (15 Percent of Points)**

100% ☐ No railroad involvement on project or railroad Right-of-Way agreement is executed (include signature page, if applicable)

50% ☐ Railroad Right-of-Way Agreement required; negotiations have begun

0% ☐ Railroad Right-of-Way Agreement required; negotiations have not begun.

Anticipated date or date of executed Agreement _____

**SCORING GUIDANCE** (75 Points)

The applicant with the most points on the Risk Assessment (more points equate to less project risk) will receive the full points for the measure. Remaining projects will receive a proportionate share of the full points. For example, if the application being scored had 40 points and the top project had 70 points, this applicant would receive (40/70)*75 points or 43 points.

## *7. Cost Effectiveness (100 Points)*

This criterion will assess the project's cost effectiveness based on the TAB-eligible project cost (not including noise walls) and total points awarded in the previous six criteria. If a project has been awarded other outside, competitive funding (e.g., state bonding, Transportation Economic Development Program, Minnesota Highway Freight Program), project sponsors may reduce the total project cost for the purposes of this scoring measure by the amount of the outside funding award.

A. **MEASURE**: This measure will calculate the cost effectiveness of the project. Metropolitan Council staff will divide the number of points awarded in the previous criteria by the TAB-eligible project cost (not including noise walls).

- Cost effectiveness = total number of points awarded in previous criteria/total TAB-eligible project cost (not including noise walls)

**RESPONSE** (This measure will be calculated after the scores for the other measures are tabulated by the Scoring Committee):

- Total Project Cost (entered in Project Cost Form):_____ (automatically calculated)
- Enter amount of Noise Walls: _____
- Enter amount of any outside, competitive funding (attach documentation of award): _____
- Points Awarded in Previous Criteria: ____ (entered by Metropolitan Council staff)

SCORING GUIDANCE (100 Points)

The applicant with the most points (i.e., the benefits) per dollar will receive the full points for the measure. Remaining projects will receive a proportionate share of the full points. For example, if the top project received .0005 points per dollar and the application being scored received .00025 points per dollar, this applicant would receive (.00025/.0005)*100 points or 50 points.

The scorer for this measure will also complete a reasonableness check of the total project cost that is used for this measure. The scorer may follow up with the applicant to clarify any questions. Up to 50 percent of points awarded for this measure can be deducted if the scorer does not believe that the cost estimate is reasonable.

**TOTAL: 1,100 POINTS**

BOLTON & MENK
Real People. Real Solutions.

12224 Nicollet Avenue
Burnsville, MN 55337-1649

Ph: (952) 890-0509
Fax: (952) 890-8065
Bolton-Menk.com

# MEMORANDUM

**Date**: December 16th, 2020

**To**: Derek Leuer, P.E. -MnDOT

**From**: Ross Tillman, P.E.

Chloe Weber, EIT

**Subject**: Regional Solicitation Before and After Study Phase II: HSIP CMF Guide
Project No.: T41.121214

Depending on staffing at various agencies who may apply for HSIP funds, the level of expertise in terms of safety analysis widely varies. In addition, there are times when two applications for a similar project will utilize different CMFs with varying levels of anticipated crash reductions. Based on these factors, there is a desire to simplify the process as well as consolidate a list of CMFs for use to the extent possible. Certain projects will always require further research and analysis using the Highway Safety Manual or CMF Clearinghouse, but a simple guide could satisfy the needs for most other projects.

Our team began by collecting the 2016 and 2018 HSIP project information. Frequency of CMFs utilized was determined as a starting point to understand which CMFs to include in an overall guide. See **Table 1**.

*Table 1: CMFs applied per category, from 2016 and 2018 application data*

| CMF Applied per Category | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lighting Improvement or Installation | Frequency | Roundabout Improvement or Construction | Frequency | Signal Improvements or Construction | Frequency | Turn Lane Construction | Frequency | Pedestrian Improvements | Frequency | Roadway Construction | Frequency |
| 578 | 5 | 227 | 3 | 1414 | 3 | 3948 | 2 | 175 | 3 | 8111 | 1 |
| 192 | 1 | 228 | 3 | 1419 | 1 | 3950 | 1 | 4123 | 3 | 1967 | 4 |
| 193 | 1 | 229 | 1 | 1420 | 6 | 253 | 1 | | | 6942 | 1 |
| 433 | 3 | 207 | 1 | 1428 | 4 | 255 | 3 | | | 2265 | 3 |
| | | 211 | 1 | 1485 | 3 | 268 | 2 | | | 2276 | 3 |
| | | 230 | 1 | 2334 | 2 | 272 | 2 | | | 2841 | 2 |
| | | 206 | 4 | 1993 | 3 | 287 | 2 | | | 6703 | 2 |
| | | 210 | 1 | 4140 | 1 | 583 | 1 | | | 1516 | 1 |
| | | 225 | 1 | 4177 | 3 | 8431 | 1 | | | | |
| | | 4699 | 1 | 8790 | 1 | | | | | | |
| | | 4700 | 2 | 5272 | 6 | | | | | | |
| | | 4927 | 1 | 6858 | 2 | | | | | | |
| | | | | 7684 | 3 | | | | | | |
| | | | | 7690 | 3 | | | | | | |
| | | | | 3072 | 1 | | | | | | |
| | | | | 8824 | 2 | | | | | | |

Ultimately, the team incorporated all the used CMFs into the guide based on relevancy and overall effort. This information was sorted by CMF to include and compare the details of the CMFs used in those years' HSIP applications. These details include the value of the CMF, the standard error, if it is listed in the HSM, the star rating, crash type, and crash severity. These details differentiate one CMF from the next and allow applicants to find the CMF that best fits the scenario of the project being applied for. From

there, counterpart CMFs (rural vs. urban, for example) were added from the CMF Clearinghouse to round out the options one might want to consider when choosing a CMF for an HSIP application. The guide was split into two parts to differentiate between CMFs that apply to all/property damage only crashes and those that are focused on injury crashes only.

Lastly, the team developed a simple step by step list for use of the guide and application of CMFs, intended to go along with the guides in future HSIP applications as an attachment. This list walks users through the categories in the guide, as well as highlights specific measures to be aware of when choosing a CMF for a project.

**Steps for using the CMF guides and applying CMFs:**

1. Look through the project types and sub-types that may be applicable to the project
2. Consider additional qualifiers that may help fit the CMF to the project (often, these are existing conditions of what is to be improved)
3. Choose which area type the project exists in (Urban, Rural, Suburban, etc.)
4. Consider the crash types and crash severities
5. Select a CMF for use that best fit the project as well as context of the area. Some projects may require the use of multiple CMFs to best represent the improvements, although the use of more than two is not recommended for most HSIP projects
6. Ensure you are applying the CMF to the correct crash severities and types. CMFs that cover all severities and types should be used with caution
7. Ensure that the crashes utilized match the timeframe/conditions of the application. Use whole calendar years

See the attached CMF guide information which could be appended to future HSIP solicitation packets.

# CMF Guide (All-Severity and Property Damage Only Crashes)

| Project Type | Additional Qualifiers | Area Type | CMF | Value | Adjusted Standard Error | Star Rating | In HSM? | Crash type | Crash Severity |
|---|---|---|---|---|---|---|---|---|---|
| **Pedestrian** | | | | | | | | | |
| Median Construction | Marked, Uncontrolled Pedestrian Crossing | Urban/Suburban | 175 | 0.54 | 0.48 | 3 | No | Veh/Ped | All |
| Median Construction | Uncontrolled Pedestrian Crossing, Marked or Unmarked | Urban/Suburban | 8800 | 0.742 | NA | 4 | No | All | All |
| High Visibility Crosswalk | High Visibility Crosswalk | Urban | 4123 | 0.6 | NA | 2 | No | Veh/Ped | All |
| Install Shared Path | No Share Path Present | Urban | 9250 | 0.75 | NA | 3 | No | Veh/Bicycle | All |
| Install Bike Lanes | No Bike Facilities Present | Urban | 2159 | 1.05 | NA | 3 | No | All | All |
| Install Bike Lanes | No Bike Facilities Present | Urban | 4658 | 0.855 | NA | 3 | No | Veh/Ped | All |
| **Reduced Conflict Intersections*** | | | | | | | | | |
| RCUT | Previously Signalized or Stop Controlled | All | 10382 | 0.8 | NA | 4 | No | All | All |
| RCUT | Previously Two Way Stop Controlled | All | 10384 | 0.42 | NA | 4 | No | All | All |
| J-Turn | Previously Two Way Stop Controlled | Rural | 5555 | 0.652 | NA | 4 | No | All | All |
| **Intersection** | | | | | | | | | |
| Turn Lane | Install Left Turn Lane | Urban | 3950 | 0.8 | NA | 3 | No | All | PDO |
| Turn Lane | Install Left Turn Lane | Rural | 7853 | 0.69 | NA | 2 | No | All | All |
| Turn Lane | Left Turn Lane on One Major Approach | Rural | 253 | 0.56 | 0.07 | 4 | Yes | All | All |
| Turn Lane | Left Turn Lane on Both Major Approaches | Rural | 268 | 0.52 | 0.04 | 5 | Yes | All | All |
| Turn Lane | Two Way Left Turn Lanes | Rural | 583 | 0.64 | 0.04 | 5 | No | All | All |
| Turn Lane | Improve Angle of Channelized Right Turn Lane | Not Specified | 8431 | 0.937 | 0.397 | 4 | No | Right Turn, Other | All |
| Single Lane Roundabout | Originally Stop Controlled | All | 227 | 0.56 | 0.05 | 5 | Yes | All | All |
| Single Lane Roundabout | Originally Stop Controlled | Rural | 229 | 0.29 | 0.05 | 5 | Yes | All | All |
| Single Lane Roundabout | Originally Stop Controlled | Rural | 207 | 0.42 | 0.13 | 4 | No | All | All |
| Single Lane Roundabout | Originally Stop Controlled | Urban | 206 | 0.28 | 0.11 | 4 | No | All | All |
| Single Lane Roundabout | Originally Signalized, Stop Controlled, and Non-Controlled | Rural | 9333 | 0.48 | NA | 3 | No | Other | All |
| Single Lane Roundabout | Originally Signalized | All | 225 | 0.52 | 0.06 | 4 | Yes | All | All |
| Single Lane Roundabout | High Speed | Rural | 4699 | 0.26 | NA | 4 | No | All | All |
| Multi-Lane Roundabout | Originally No Control, Yield, TWSC, AWSC, or Signal Control | All | 4926 | 1.062 | NA | 4 | No | All | All |
| Signal Head | Add Signal (Additional Primary Head) | Urban | 1414 | 0.72 | NA | 3 | No | All | All |
| Signal Head | Add Signal (Additional Primary Head) | Urban | 1419 | 0.65 | NA | 2 | No | Angle | All |
| Signal Head | Add Signal (Additional Primary Head) | Urban | 1416 | 0.69 | NA | 3 | No | All | PDO |
| Signal Head | Convert Signal From Pedestal-Mounted to Mast Arm | Not Specified | 1420 | 0.51 | NA | 3 | No | All | All |
| Signal Head | Convert Signal From Pedestal-Mounted to Mast Arm | All | 1428 | 0.26 | NA | 3 | No | Angle | All |
| Signal Head | Add Signal (One Over Each Approach Lane) | Urban | 1485 | 0.54 | NA | 2 | No | Angle | All |
| Signal Head | Replace 8" Red with 12" | Not Specified | 2334 | 0.97 | NA | 3 | No | All | All |
| Signal Phasing | Leading Pedestrian Interval | Urban | 1993 | 0.413 | NA | 3 | No | Veh/Ped | All |
| Intersection Traffic Control | Change Permissive Left to Protected or Protected/Permissive | Urban | 4140 | 0.58 | NA | 2 | No | All | All |
| Intersection Traffic Control | Change Protected/Permissive to Flashing Yellow Arrow | Urban | 4177 | 0.806 | NA | 4 | No | Left Turn | All |
| Intersection Traffic Control | Install Pedestrian Countdown Timer | Not Specified | 8790 | 0.912 | NA | 4 | No | All | All |
| Intersection Traffic Control | Install Pedestrian Countdown Timer | Not Specified | 5272 | 0.3 | NA | 4 | No | Veh/Ped | All |
| Intersection Traffic Control | Install Adaptive Traffic Signal Control | Urban/Suburban | 6858 | 0.79 | NA | 4 | No | All | All |
| Intersection Traffic Control | Change from Permissive Only to Flashing Yellow Arrow | Not Specified | 7684 | 0.598 | NA | 2 | No | Left Turn | All |
| Intersection Traffic Control | Change from Protected Only to Flashing Yellow Arrow | Not Specified | 7690 | 0.901** | NA | 4 | No | All | All |
| Intersection Traffic Control | Change Number of Traffic Signal Cycles Per Hour on Arterial with Signal Coordination From X to Y | Urban/Suburban | 3072 | e^-0.0444(Y-X) | NA | 3 | No | Rear End | All |
| Advanced Technology and ITS | Install Red-Light Indicator Lights | Not Specified | 8824 | 0.713 | NA | 4 | No | Other | All |
| Access Management | Create Directional Median Openings to Allow Left-Turns and U-Turns | Not Specified | 1516 | 0.49 | NA | 2 | No | All | All |
| **Roadway** | | | | | | | | | |
| Lighting | Illumination | Not Specified | 496 | 0.69 | 0.36 | 3 | No | All | PDO |
| Lighting | Highway Lighting | All | 193 | 0.83 | 0.07 | 4 | Yes | Nighttime | PDO |
| Wet-Reflective Pavement Markings | Previously Standard Markings | Not Specified | 8111 | 0.538 | NA | 4 | No | Run Off Road | All |
| Median | Install Cable Median Barrier (High Tension) | Not Specified | 1967 | 0.04 | 0.06 | 3 | No | Cross Median, Frontal and Opposing Direction Sideswipe, Head On | All |
| Install Centerline and Shoulder Rumble Strips | No Existing Rumble Strips | Rural | 6942 | 0.653 | NA | 4 | No | All | All |
| Improve Pavement Friction | Increase Skid Resistance | All | 2265 | 0.589 | 0.216 | 3 | No | All | All |
| Improve Pavement Friction | Increase Skid Resistance | All | 2276 | 0.304 | 0.086 | 3 | No | Rear End | All |
| Road Diet | Previously Four Lane Undivided | Suburban | 2841 | 0.53 | NA | 4 | No | All | All |
| Road Diet | Previously Four Lane Undivided | Urban | 5553 | 0.748 | NA | 4 | No | All | All |
| **Shoulder Treatments** | | | | | | | | | |
| Widen Shoulder | Previously Narrow Paved Shoulder | Rural | 6703 | 0.67 | NA | 4 | Yes*** | Fixed Object, Head on, Run Off Road, Sideswipe | PDO |

*Minnesota study underway

**Results in Minnesota have indicated an increase in crashes

***See section 13.4.2.4 in the HSM for additional shoulder CMF information

# CMF Guide (Injury Crashes)

| Project Type | Additional Qualifiers | Area Type | CMF | Value | Adjusted Standard Error | Star Rating | In HSM? | Crash type | Crash Severity |
|---|---|---|---|---|---|---|---|---|---|
| **Pedestrian** | | | | | | | | | |
| Median Treatment for Ped/Bike Safety | Install Various Treatments Such as Fencing, Planters, Pedestrian Islands | Urban | 9121 | 0.91 | NA | 4 | No | All | K, A, B |
| Install Sidewalk | No Exisitng Sidewalk | Urban | 9240 | 0.41 | NA | 2 | No | Veh/Bicycle | K, A |
| Install Bike Lanes | No Bike Facilities Present | Urban | 4660 | 0.946 | NA | 3 | No | All | K, A, B, C |
| **Reduced Conflict Intersections*** | | | | | | | | | |
| J-Turn | Previously Two Way Stop Controlled | Rural | 5559 | 0.14 | NA | 2 | No | All | A |
| **Intersection** | | | | | | | | | |
| Turn Lane | Install Left Turn Lane | Urban | 3948 | 0.79 | NA | 3 | No | All | K, A, B, C |
| Turn Lane | Install Left Turn Lane | Rural | 7852 | 0.73 | NA | 3 | No | All | K, A, B, C |
| Turn Lane | Left Turn Lane on One Major Approach | Rural | 255 | 0.45 | 0.1 | 4 | Yes | All | K, A, B, C |
| Turn Lane | Left Turn Lane on Both Major Approaches | Rural | 272 | 0.42 | 0.04 | 5 | Yes | All | K, A, B, C |
| Turn Lane | Right Turn Lane on One Major Approach | All | 287 | 0.77 | 0.08 | 4 | Yes | All | K, A, B, C |
| Lighting | Provide Intersection Illumination | Not Specified | 433 | 0.62 | 0.13 | 4 | Yes | Nighttime | A, B, C |
| Single Lane Roundabout | Originally Stop Controlled | All | 228 | 0.18 | 0.04 | 5 | Yes | All | A, B, C |
| Single Lane Roundabout | Originally Stop Controlled | Rural | 211 | 0.18 | 0.16 | 4 | No | All | A, B, C |
| Single Lane Roundabout | Originally Stop Controlled | Rural | 230 | 0.13 | 0.04 | 5 | Yes | All | A, B, C |
| Single Lane Roundabout | Originally Stop Controlled | Urban | 210 | 0.12 | 0.14 | 4 | No | All | A, B, C |
| Single Lane Roundabout | High Speed | Rural | 4700 | 0.11 | NA | 4 | No | All | A, B, C |
| Multi-Lane Roundabout | Originally No Control, Yield, TWSC, AWSC, or Signal Control | All | 4927 | 0.367 | NA | 4 | No | All | K, A, B, C |
| Single or Multi-Lane Roundabout | Originally TWSC | All | 4931 | 0.65 | NA | 4 | No | All | K, A, B, C |
| Roundabout | Originally AWSC | All | 4933 | 0.544 | NA | 3 | No | All | K, A, B, C |
| Low Speed Roundabout | Originally No Control, Yield, TWSC, AWSC, or Signal Control | All | 5228 | 0.473 | NA | 4 | No | All | K, A, B, C |
| **Roadway** | | | | | | | | | |
| Lighting | Illumination | Urban | 578 | 0.69 | 0.07 | 4 | No | All | A, B, C |
| Lighting | Illumination | All | 571 | 0.31 | 0.36 | 3 | No | All | K |
| Lighting | Highway Lighting | All | 192 | 0.72 | 0.06 | 4 | Yes | Nighttime | A, B, C |
| Median | Install Cable Median Barrier (High Tension) | Rural | 8214 | 0.47 | NA | 3 | No | Other | K, A |
| **Shoulder Treatments** | | | | | | | | | |
| Widen Shouler | Previously Narrow Paved Shoulder | Urban | 6705 | 0.74 | NA | 3 | No | Fixed Object, Head on, Run Off Road, Sideswipe | A, B, C |

*Minnesota study underway

# INFORMATION ITEM

| | |
|---|---|
| **DATE:** | June 15, 2021 |
| **TO:** | TAC Funding and Programming Committee |
| **PREPARED BY:** | Joe Barbeau, Senior Planner (651-602-1705)<br>Steve Peterson, Manager of Highway Planning and TAC/TAB Process (651-602-1819)<br>Elaine Koutsoukos, TAB Coordinator (651-602-1717) |
| **SUBJECT:** | 2022 Regional Solicitation: Outlier Adjustments |

At the June 17 Funding & Programming Committee meeting, members discussed the topic of outlier adjustments at length. While no votes or "official" stances were taken, members tended to agree on the following points:

- An outlier can cause a scoring measure to lose its value by providing minimal differentiation between most applications.
- An adjustment can help to create differentiation between applications.
- Adjustments will diminish the advantage for the top-scoring project, and it is worth exploring mitigating that impact.
- A reasonable interpretation of when an outlier adjustment may be needed is when no application scores even 50% of the top-scoring application.
    - While there was descent, most members thought scoring committees should use their judgment on whether it makes sense to make an adjustment.
- A reasonable outlier adjustment would be to move the second-place application to a percentage of the top application (e.g., 50% or 75%) at the discretion of the committee members.
- Not every adjustment that has been made has been successful. Committees should use care when making an adjustment.
- An outlier should be a "last resort."

At this point, the Committee will consider providing a recommendation for how to address outliers. Some options include:

1. Do not make any changes. This will result in scoring committees continue to use the "we know it when we see it" approach to addressing outliers.
2. Disallow outlier adjustments
3. Set prescriptive parameters for a) when to adjust for an outlier and b) how to adjust.
    - When to adjust:
        - When no application scores even half of the full points scored by the top-scoring application.
        - A different approach?
        - Should a minimum number of applications be required for an outlier to be adjusted for?
    - How to adjust:
        - Allow committees to set the second-ranked application at 50% to 75% of the top-scoring project.
        - A different approach?

- Following adjustments, committees should closely examine whether the adjustment is effective (See example on page 3).

Assuming outliers are allowed with scoring committee discretion, consideration could be given to not allowing this decision to be subject to a scoring challenge. A challenge was made in 2020, with an applicant suggesting that an outlier adjustment should have occurred on a measure.[1]

[1] The score was not changed, as Funding & Programming determined that the scorer and scoring committee did not have an obligation to adjust for an outlier since there are no standards.

# Example of Unsuccessful Adjustment that Meets Parameters Suggested at 6/17/2021 Funding And Programming Committee Meeting

Regional Solicitation: 2018

Funding Category: Roadway Strategic Capacity

Scoring Measure: 1B Connection to Total Jobs, Manufacturing/Distribution Jobs, and Students (Connection to Total Jobs Component)

| Employment w/i 1 mile | Score (Max 50) - Per Scoring Guidance | Final Score - Per Removal of High Scoring Outlier | Change in Gap Over Below Score | Change in Gap vs. Top |
|---|---|---|---|---|
| 72,624 | 50 | 50 | -40 | N/A |
| 13,974 | 10 | 50 | +10 | -40 |
| 10,291 | 7 | 37 | +2 | -30 |
| 9,813 | 7 | 35 | 0 | -28 |
| 9,373 | 6 | 34 | +6 | -28 |
| 7,705 | 5 | 28 | +1 | -23 |
| 7,546 | 5 | 27 | +3 | -22 |
| 6,585 | 5 | 24 | +1 | -19 |
| 6,172 | 4 | 22 | +2 | -18 |
| 5,460 | 4 | 20 | +2 | -16 |
| 5,044 | 3 | 18 | 0 | -15 |
| 5,001 | 3 | 18 | +8 | -15 |
| 2,609 | 2 | 9 | +4 | -7 |
| 1,064 | 1 | 4 | +1 | -3 |
| 787 | 1 | 3 | +1 | -2 |
| 440 | 0 | 2 | +1 | -2 |
| 276 | 0 | 1 | N/A | -1 |

The original scoring spread resulted in one application scoring 50 points while 16 applications scored 0 to 10 points, providing almost no differentiation among the applications not ranked first. The adjustment in the third column was meant to address this, though the change in scoring gap was marginal, primarily impacting the advantage of the top-performing application. This is shown in the far-right column, which shows the loss of margin between each project and the top-rated project.

Overall, this adjustment was most beneficial to the second-ranked project and most damaging to the top-ranked project.

# INFORMATION ITEM

| | |
|---|---|
| **DATE:** | June 15, 2021 |
| **TO:** | TAC Funding and Programming Committee |
| **PREPARED BY:** | Joe Barbeau, Senior Planner (651-602-1705)<br>Steve Peterson, Manager of Highway Planning and TAC/TAB Process (651-602-1819)<br>Elaine Koutsoukos, TAB Coordinator (651-602-1717) |
| **SUBJECT:** | 2022 Highway Safety Improvement Program Draft Solicitation |

Attached is the 2020 Highway Safety Improvement Program (HSIP) Solicitation. Several changes were made prior to that Solicitation, and the attached shows no changes for 2022. At this point, the only change being explored is incorporation of the pedestrian safety discussed earlier at this meeting. The pedestrian safety measure being considered for the Regional Solicitation may also be considered for HSIP.

# HSIP

# *Highway Safety Improvement Program*

For State Fiscal Years 2024 and 2025

## Metro District
## Program Criteria

Minnesota Department of Transportation
Metro District Traffic Engineering
February 2020

# Table of Contents



**Appendix:**

# Introduction

This document explains the requirements, and gives guidance for the Highway Safety Improvement Program (HSIP) to applicants desiring to obtain federal funds under the Federal FAST Act legislation. In FAST Act, the purpose of HSIP is to achieve a significant *reduction in traffic fatalities and serious injuries* on all public roads. Projects submitted should have the greatest potential of achieving this objective. See Appendix B for a timeline flowchart of the HSIP solicitation, application and evaluation process.

**General Policies:**

1. HSIP funds are available to MnDOT; the counties of Anoka, Carver, Chisago, Dakota, Hennepin, Ramsey, Scott, and Washington; and the State Aid eligible cities and towns within those counties. Applicants that are not State Aid cities or counties in the eight-county metro area with populations over 5,000 must contact the MnDOT Metro State Aid Office prior to submitting their application to determine if a public agency sponsor is required.

2. The maximum HSIP federal award is $2,000,000 per project. A minimum local match of 10% of the total project cost is required. The match must be in "hard dollars." Soft matches (i.e.; volunteer labor, donated materials, professional services) cannot be included in the match.

3. HSIP funding cannot be used as a "payback" source of funding, whereby local agencies construct a project and anticipate future reimbursement monies from HSIP funds.

4. This solicitation is for both "Proactive" and "Reactive" projects. Distribution of funds between these two project types will depend on a number of factors including the dollar amount and number of projects submitted in each category, types of projects submitted and geographic balance of projects throughout the Metro District.

5. Funding is for roadway construction and reconstruction projects designed to decrease the frequency and/or severity of crashes. These crashes can involve pedestrians, bicycles, and other non-motorized vehicles. The project must be a permanent improvement. Right-of-way, design, and construction engineering costs are not fundable and shall not be included in the project cost. Please refer to https://safety.fhwa.dot.gov/hsip/

6. The amount of federal funds awarded is based upon the original submission. Any increase in scope or costs will be the responsibility of the applicant.

7. Projects awarded funding through the regional HSIP solicitation are subject to the Region's "Program Year Policy" and "Scope Change Policy" available at https://metrocouncil.org/Transportation/Planning-2/Transportation-Planning-Process.aspx?source=child

8. Projects may apply for both the Regional Solicitation and the Highway Safety Improvement Program (HSIP), but projects can only be awarded funds from one of the two programs.

9. The amount of funding available for this 2020 Metro District solicitation for State Fiscal Years 2024 and 2025 is approximately **$23 million** for the two-year period. Additional funding may be available in State Fiscal Year 2022.

# Qualifying Criteria

The objective of the Highway Safety Improvement Program (HSIP) is to identify, evaluate, and implement cost effective construction safety projects with a primary goal of **reducing and preventing fatal and serious injury crashes on all public roads.**

Priority will be given to smaller stand-alone, low-cost / high-benefit projects. Applicants should submit focused safety projects and not asset replacement projects unless the replacement project by itself increases safety. See Appendix C for additional traffic signal requirements. Safety features, such as guardrails, that are routinely provided as part of a broader project should be funded from the same source as the broader project. In some instances, narrow shoulder paving in conjunction with resurfacing projects may be allowed. See Appendix D for this exception.

**FOR PROACTIVE PROJECTS:**

For MnDOT Metro District and the Metro counties, their road safety plans should be the starting point for selecting projects for this solicitation. For state and county roads, projects that originate from a road safety plan will be given priority. For local streets, a city may propose strategies similar to what is in their county's safety plan if applicable.

The following crash data is provided to assist cities in focusing on the types of projects to submit. On local roads (MSAS and city streets) in the Metro District over the latest 5 year period available (2014-2018) there have been 1,315 fatal and serious injury crashes:
458 (35%) involved two or more vehicles colliding

- 339 (26%) involved a pedestrian
- 118 (9%) involved a bicyclist
- 96 (7%) involved hitting a tree or shrub

Seventy-five percent of the fatal and serious injury crashes fall into these four categories listed above, so the focus should be on low-cost solutions that are geared toward impacting those types of crashes.

Reactive projects should propose safety improvements that directly address the types of crashes experienced within the project area.

Priority will be given to applications that are making cost effective impacts throughout the network (at multiple locations) or via a corridor-based approach.

Signalized intersections in urban areas tend to involve more risk than other types of intersections. A focus on signalized intersections, such as countdown timers, signal retiming, enforcement lights, curb extensions, etc. would have an impact on these target crashes.

The following is a list of example projects that would be considered for proactive funding with this program:

- Reduced-conflict intersections (RCI's)
- Rumble strips
- Rumble stripEs
- Wider striping (6")
- Embedded wet reflective striping
- Delineation for sharp curves (chevrons)
- Cable median barrier
- Crosswalk enhancements (ex. RRFB's)
- Intersection lighting
- Corridor lighting (Freeways & Expressways)
- Curb extensions (bump-outs)
- Sight distance improvements
- Remove hazards in clear zones
- Pedestrian countdown timers
- Construct ped refuge islands & raised medians
- Enforcement lights on signals
- Turn lanes
- New guardrail (not replacement)
- Frontage roads (with access removals)
- Sidewalks or trails
- Narrow shoulder paving (see Appendix D)
- Signal coordination (interconnect)
- Pavement messages
- Roundabouts
- Stop bars
- Safety edge
- Friction treatments
- Road diets

**FOR REACTIVE PROJECTS:**

For this solicitation, proposed projects qualify for the HSIP program by having a benefit/cost (B/C) ratio of 1.0 or greater*. (Note: The B/C ratio shall exclude right-of-way costs. The cost used should be the total project cost, not the amount of requested HSIP dollars.)

*Only crashes contained within the Minnesota Department of Public Safety's database can be used to determine the B/C for project submittals. Crash data must be obtained from MnDOT. MnDOT Metro District Traffic Office will provide a crash listing, upon request.

(See Appendix A)

# Prioritization Criteria

The HSIP project evaluation committee will determine if the submitted projects have met the intent of the qualifying criteria and HSIP.

Pedestrian and bicycle crashes are a focus area in the Minnesota Strategic Highway Safety Plan. Additional consideration will be given to projects which address pedestrian and bicycle safety. To account for the greater proportion of severe injuries of bike and pedestrian crashes each bike and pedestrian crash should be enter as two on the B/C worksheet.

**FOR PROACTIVE PROJECTS:**

For Proactive projects, priority will be given to projects identified in road safety plans, and projects that have the highest possibility of reducing the chance of fatal and serious injury crashes. The following criteria will be used in ranking proactive projects:

- Connection to the 2014-2019 Minnesota Strategic Highway Safety Plan (SHSP). This Plan can be found at the following link: http://www.dot.state.mn.us/trafficeng/safety/shsp/Minnesota_SHSP_2014.pdf
- Cost per user exposure
- Correctable fatal and serious injury crashes (10 years, 2009 - 2018)
- Crash reduction factor for the specific strategy
- Part of a plan (safety plan or road safety audit recommendations) – include a link to or an excerpt from the existing plan
- Pedestrian and bicycle safety elements

## FOR REACTIVE PROJECTS:

The reactive projects will be prioritized by:

- Highest B/C ratio
- The scoring committee will review the projects to determine how well they meet the qualifying criteria and intent of the HSIP program, to achieve a significant reduction in traffic fatalities and serious injuries on all public roads. In addition to crash history the existence of risk factors and experience with crash types that are risk factors for more severe crashes are relevant here.
- Correctable fatal and serious injury crashes (10 years, 2009 - 2018)
- Pedestrian and bicycle safety elements

## EVALUATION PROCESS:

Project proposals will be reviewed by MnDOT's Metro District Traffic Engineering unit initially to determine if they meet the qualifying criteria. The HSIP committee will finalize a prioritized list of projects to be funded.

The HSIP committee will consist of:

- MnDOT Metro District Traffic Engineer - Program Support
- MnDOT Metro Traffic Safety Specialist
- MnDOT State Traffic Safety Engineer
- Two County/City Engineers
- Metropolitan Council Regional Highway Planner

# Required Material and Special Instructions

Following is a list of materials required to be submitted per project. Failure to provide this information may exclude the submission from consideration:

- HSIP application (Form 1) (See appendix for Form 1)
- Project information sheet (Form 2) (See appendix for Form 2)
- Location map
- A photograph showing the existing conditions within the project area. If awarded funds, this photograph will be utilized in the Metropolitan Council's online mapping tool to show a before-and-after comparison of the improvement. By submitting the application, the applicant is agreeing to allow the Metropolitan Council to use this photograph.
- Project plan or preliminary layout/scope of work proposed.
- Provide the AADT or an average AADT for your project area. If an intersection project, provide the AADT for the minor road too.
- For intersection projects only, provide collision diagrams. Include crash listing obtained from MnDOT. MnDOT will not provide collision diagrams.
- The applicant must include a letter of support from the agency that owns/operates the facility (if different from the applicant) indicating that it is aware of and understands the project being submitted, and that it commits to operate and maintain the facility for its design life.
- The project applicant must send written notification regarding the proposed project to all affected state and local units of government prior to submitting the application.
- Projects on MSAS and CSAH roadways must meet state aid standards.
- The project must comply with the Americans with Disabilities Act (ADA).
- In order for a selected project to be included in the Transportation Improvement Program (TIP) and approved by USDOT, the public agency sponsor must either have a current Americans with Disabilities Act (ADA) self-evaluation or transition plan that covers the public right of way/transportation, as required under Title II of the ADA. The plan must

be adopted by the local agency before the application deadline. For the 2022 funding cycle, this requirement may include that the plan is updated within the past five years. Please document which of these apply:

☐ The applicant is a public agency that employs 50 or more people and has an adopted ADA transition plan that covers the public right of way/transportation. Date plan adopted by governing body and link to plan: _____

☐ The applicant is a public agency that employs 50 or more people and does not have an adopted ADA transition plan that covers the public right of way/transportation.

☐ The applicant is a public agency that employs fewer than 50 people and has a completed ADA self-evaluation that covers the public rights of way/transportation. Date self-evaluation completed and link to plan: _____

☐ The applicant is a public agency that employs fewer than 50 people and does not have a completed ADA self-evaluation that covers the public rights of way/transportation.

## FOR PROACTIVE PROJECTS:

- Provide total miles of strategy deployment.
- Provide a reasonable Crash Reduction Factor (CRF) from the FHWA's CMF Clearinghouse (MUST include a printout of the CRF reference page) http://www.cmfclearinghouse.org/
- For all applications, the applicant is required to write a brief logical explanation on why they chose a particular CRF.
- Number of fatal and serious injuries in the past 10 years (2009-2018) that have occurred where you propose to implement an HSIP project. MnDOT will provide this crash data upon request. (Projects may be eligible for HSIP even if no fatal or severe injuries have occurred in your implementation area.)
- Collision diagrams may be submitted but are not required.
- Crash data shall include crashes from calendar years **2016-2018**. Only crashes contained within the Minnesota Department of Public Safety's database can be shown. This is to ensure that all project proposals can be equally compared. A crash listing can be obtained from MnDOT upon request (see Appendix A for contact information). Crash data should include all crash types and severities, including pedestrian and bicycle crashes.

- If on a trunk highway, provide signed Intersection Control Evaluation (ICE) report for proposed intersection traffic control changes.

- MnDOT and counties, please attach copy of the appropriate page(s) from your highway safety plan for projects submitted that are referenced in your Plan.

- Discuss how the project will improve safety for pedestrians and bicyclists. Safety countermeasures for pedestrians and bicyclists can include those identified by the FHWA as part of its Safe Transportation for Every Pedestrian program or others in its Proven Safety Countermeasures (e.g., pedestrian refuge islands, raised crosswalks, pedestrian hybrid beacons, leading pedestrian intervals). More information about pedestrian and bicycle safety best practices is also available in MnDOT's Best Practices for Pedestrian/Bicycle Safety.

**FOR REACTIVE PROJECTS:**

- Provide a reasonable Crash Reduction Factor (CRF) from the FHWA's CMF Clearinghouse (MUST include a printout of the CRF reference page) http://www.cmfclearinghouse.org/
  **For all applications, the applicant is required to write a brief logical explanation on why they chose a particular CRF.**

- The crash data shall include crashes from calendar years **2016-2018**. Only crashes contained within the Minnesota Department of Public Safety's database can be shown. This is to ensure that all project proposals can be equally compared. A crash listing can be obtained from MnDOT upon request (see Appendix A for contact information). Crash data should include all crash types and severities, including pedestrian and bicycle crashes.
  If an individual crash is not in the DPS crash database, it cannot be included in the analysis or the submittal, unless the agency provides acceptable proof of the existence of the crash. Acceptable proof is a copy of the police or citizen accident report. If a crash report was not written, the crash may not be included. If the crash had no injuries and the minimum dollar amount was not met ("N" in the "$min" box on a police report), the crash cannot be included.

  ***Crash data requests to MnDOT should be made as soon as possible but before March 1, 2020. Requests made after March 1st may be significantly delayed due to limited resources. MnDOT will not provide collision diagrams.***

- Number of fatal and serious injuries in the past 10 years (2009-2018) that have occurred where you propose to implement a HSIP project. MnDOT will provide this crash data upon request. (Projects may be eligible for HSIP even if no fatal or severe) injuries have occurred in your implementation area.)

- HSIP B/C Worksheet – A sample HSIP B/C worksheet is included in Appendix E. Refer to Appendix F for recommended service life criteria.

  You can find an Excel version of a HSIP Benefit Cost Worksheet on this web page.

- If on a trunk highway, provide signed Intersection Control Evaluation (ICE) report for proposed intersection traffic control changes.

- Description of how the project meets the intent of the HSIP program (i.e. reduce fatal and serious injury crashes within the proposed project area)

- Proposed roundabouts must address mini-roundabouts as an option

- Discuss how the project will improve safety for pedestrians and bicyclists. Safety countermeasures for pedestrians and bicyclists can include those identified by the FHWA as part of its Safe Transportation for Every Pedestrian program or others in its Proven Safety Countermeasures (e.g., pedestrian refuge islands, raised crosswalks, pedestrian hybrid beacons, leading pedestrian intervals). More information about pedestrian and bicycle safety best practices is also available in MnDOT's Best Practices for Pedestrian/Bicycle Safety.

## SUBMISSION OF APPLICATION:

Applicants must send two paper copies of each project submittal along with an electronic submittal.

**Paper copies to:**
MnDOT, Traffic Engineering
Attn: Lars Impola
1500 West County Road B2
Roseville, MN 55113

**Electronic submittal to:** Lars.Impola@state.mn.us

# Crash Reduction Factors

A Crash Reduction Factor (CRF) is the percentage crash reduction that may be expected after implementing a given countermeasure. A CRF should be regarded as a generic estimate of the effectiveness of a countermeasure. The estimate is a useful guide, but it remains necessary to apply engineering judgment and to consider site-specific environmental, traffic volume, traffic mix, geometric, and operational conditions, which will affect the safety impact of a countermeasure.

The proposal should reference the FHWA Crash Modification Factors (CMF) Clearinghouse, which can be found at the following website http://www.cmfclearinghouse.org/.

**For all applications, the applicant is required to write a brief logical explanation on why they chose a particular CRF.**

In lieu of relying on crash reduction tables, proposals may contain an estimate of crash reductions based upon logical assumptions. The proposal will have to thoroughly demonstrate in a logical fashion how each improvement will impact each type of crash. The HSIP Committee will review the documentation for accuracy and concurrence with logic.

Some examples of acceptable estimates are listed below:

**Example 1**: A project is proposing closure of a median at an intersection. Logically, all left turning and cross street right angle crashes will be eliminated. (100% reduction in these types of crashes).

**Example 2**: A project is proposing a traffic signal revision including creating a protected left turning phase for the minor leg of the intersection. This project should reduce the amount of minor leg left turn crashes significantly (90% reduction). Additionally, any significant improvement in capacity would reduce rear end collisions slightly (10% reduction for minor capacity improvements, 20% for significant improvements).

**Example 3**: A project is proposing a traffic signal revision including adding left and right turn lanes. Adding turn lanes should reduce rear end collisions and some turning collisions depending on proposed versus existing phasing. (20% reduction in impacted rear end collisions is reasonable).

The project initiator may contact a member of the MnDOT review team (see Appendix A) to discuss crash reduction assumptions for each improvement project prior to submittal.

If only one improvement is included in the proposed project, the crash reduction factors from the FHWA CMF Clearinghouse, or a percentage reduction based on an estimated procedure

described above can be entered directly into the benefit/cost (B/C) worksheet. If two improvements are included in the proposed project, the overall crash reduction factor should be determined using the "multiple safety improvement crash reduction formula" described below.

**Multiple Safety Improvement Crash Reduction Formula:**

- **CRF = 1 – [(1 – CRF1) x (1 – CRF2)]**

CRF is the overall crash reduction factor expressed as a decimal (to two significant digits) to be used on the B/C worksheet
CRF1 is the crash reduction factor for the first improvement expressed as a decimal
CRF2 is the crash reduction factor for the second improvement expressed as a decimal.

- **Each crash may only be used on one B/C worksheet.**
- **Use the total cost of the project in the denominator on the B/C worksheet(s).**
- **All individual B/C worksheets must be submitted, and the application must include an overall B/C calculation.**
- **If using multiple CRF's providing your calculation is required.**
- **No more than two CRF's per crash type and location will be allowed.**

# Use of Fatal Crashes

| Type of Crash | Crash Severity | Cost per Crash |
|---|---|---|
| Fatal (F) | 1 Fatal Crash | $12,300,000 |
| Personal Injury (PI) | 2 Serious Injury | $680,000 |
| Personal Injury (PI) | 3 Minor Injury | $210,000 |
| Personal Injury (PI) | 4 Possible Injury | $110,000 |
| Property Damage (PD) | 5 Property Damage Only | $12,000 |

Since fatal crashes are often randomly located, there is considerable debate as to whether they should be treated as personal injury crashes or as fatalities. Furthermore, the value assigned is subject to many considerations. With the above in mind, the following criteria shall be used when computing expected crash reduction benefits:

1. The cost assigned to a fatal crash may be used if there are two or more "correctable" fatal crashes within a three-year period (correctable is defined as the type of crash that the improvement is designed to correct).

OR

2. The cost per fatal crash may be used when there is at least one correctable fatal crash **and** two or more type "serious injury" crashes within a three-year period.

If the above criteria are not satisfied, the correctable fatal crash shall be treated as two "Serious Injury" type crashes (Fatal Crash = 2 x Serious Injury) when computing the benefit-cost ratio. To do this, enter the correctable fatal crash as two "Serious Injury" crashes in the "2" category on the HSIP B/C worksheet.

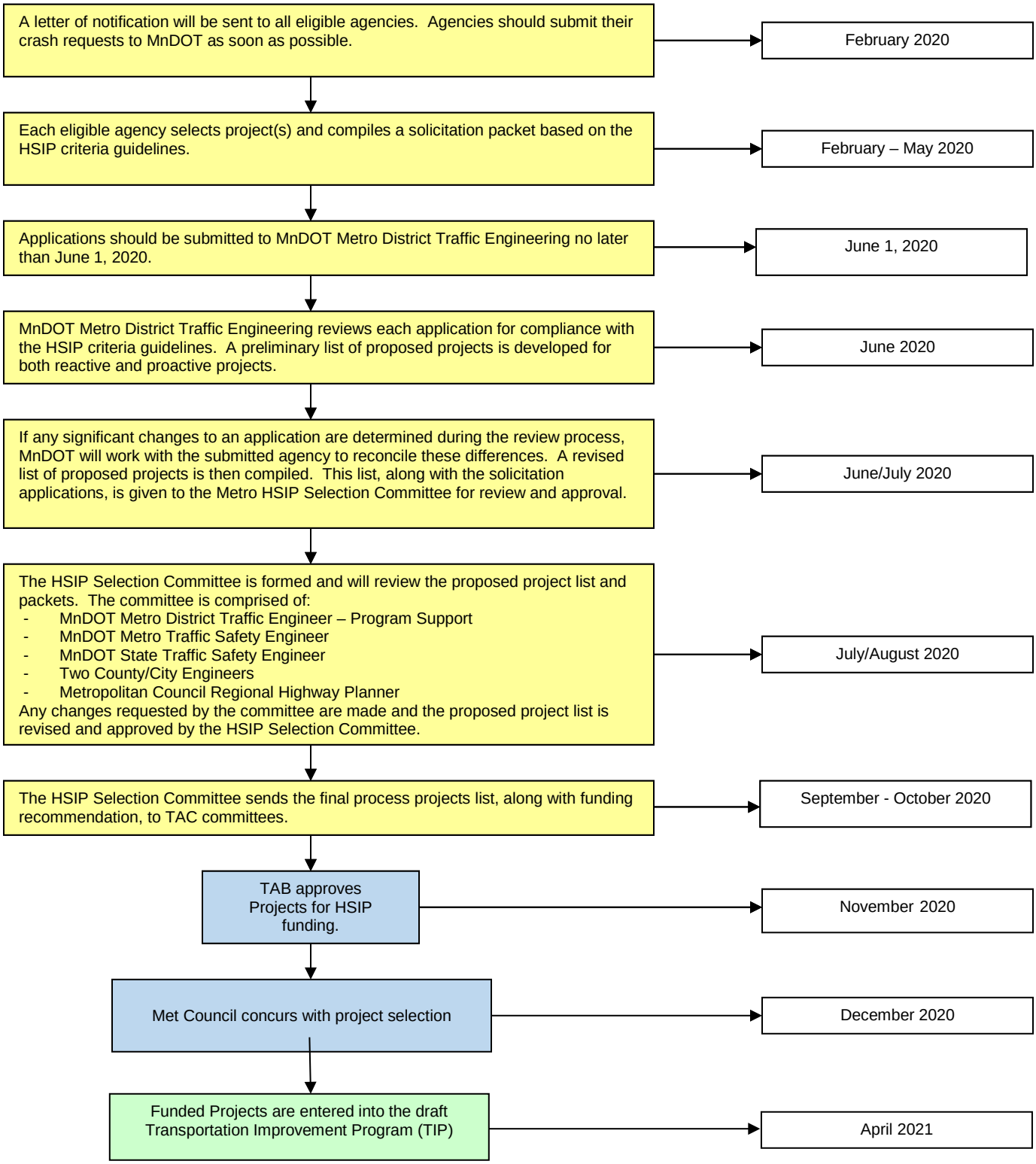
# Appendix A

**MnDOT Metro District Traffic Engineering**
**Program Support Contacts**

| Information | Contact | E-Mail | Phone Number |
|---|---|---|---|
| Proposal Content | Kaare Festvog | kaare.festvog@state.mn.us | 651/234-7814 |
| Proposal Content | Lars Impola | lars.impola@state.mn.us | 651/234-7820 |
| Crash Information | Cherzon Riley | cherzon.riley@state.mn.us | 651/234-7836 |

# Appendix B

## Highway Safety Improvement Program (HSIP)
## Metro District Process Timeline (2020)



# Appendix C

**Traffic Signals:**

In most cases, traffic signals are not safety control devices. They assign right of way for vehicles and are necessary for operational purposes. However, in some cases they can improve safety. The objective for the Highway Safety Improvement Program is to reduce the occurrence of and the potential for fatalities and serious injuries resulting from crashes on all public roads" (23 CRF 924.5). Signal projects will be considered for funding provided they meet the following criteria.

1. New Signals:

    - Warrant 7, Crash Experience from the Minnesota Manual on Uniform Traffic Control Devices (MMUTCD) must be met. FHWA's Interim Approval for Optional Use of an Alternative Signal Warrant 7 – Crash Experience (IA-19) should be followed. Exceptions to meeting this warrant may be made if an adequate case is made on how the new signal will "reduce the number of, or potential for, fatalities and serious injuries" as required by FAST Act.

    - All new signals on a trunk highway shall meet current MnDOT design standards. If exceptions to incorporating these standards are necessary due to site-specific conditions, explanation should be included with the application.

    - Installation of red light running (enforcement) lights is strongly encouraged. Installation costs are low when installed with new signals and they provide the benefit of red light running enforcement to be accomplished by one law enforcement officer, instead of two.

    - Documentation should be provided confirming that other intersection types were considered but are not feasible. Those considered should include intersection types that reduce the probability of severe right-angle crashes. Roundabouts, reduced conflict intersections (RCI) and some alternative intersection types fall into this category.

2. Existing Signals:

    - Rebuilding an existing signal system may be eligible for HSIP funding if it is necessary for implementation of a geometric improvement, where the signal system cost is incidental to the primary geometric safety improvement on the project.

    - Rebuilding an existing signal system without geometric improvements may be eligible for HSIP funding if additional safety devices are included, such as: adding mast arms, adding signal heads, interconnect with other signals, etc.

3. Retiming of Signal Systems:

    - The development and implementation of new signal timing plans for a series of signals, a corridor, or the entire system are not eligible for HSIP funds.

# Appendix D

**Guidelines for HSIP-funded narrow shoulder paving in conjunction with resurfacing projects:**

If narrow shoulder paving projects are funded through HSIP, it makes sense under certain circumstances to do the work in conjunction with a resurfacing project, rather than as a separate, stand-alone project. Work involving the paving of existing aggregate or turf shoulders with 1 to 2 feet of pavement may be allowed within the following guidelines:

- Narrow shoulder paving can be done in conjunction with resurfacing if the project is along one of the segments specifically identified in the County Road Safety Plan for this type of work.

- The project can be at a different location than those identified in the CRSP if it is along a higher-risk segment, as identified in the CRSP. The CRSP assigns a risk rating to highway segments based on the following criteria: traffic volume, rate and density of road departure crashes, curve density and edge assessment. The risk rating ranges from 0 (lower risk) to 5 (higher risk). **If the proposed project is along a highway segment with a rating of 4 or 5, then it can be done in conjunction with a resurfacing project.** This process ensures that narrow shoulder paving is being done at locations of higher risk rather than being driven by the schedule of pavement rehabilitation projects.

- The shoulder paving must include a safety edge and either shoulder or edgeline rumble or mumble strips.

- If a project is required to construct more than 2 foot shoulders per State Aid standards, or if the applicant plans for more than 2 foot shoulders, HSIP funding cannot be used for any additional width beyond 2 feet (local funds may be used for the additional width).

- The applicant should use regular construction dollars to upgrade guardrail and other safety hardware as part of the resurfacing project.

# Appendix E

B/C Worksheet example see following 2 pages

**Traffic Safety Benefit-Cost Calculation**

Highway Safety Improvement Program (HSIP) Reactive Project

DEPARTMENT OF TRANSPORTATION

## A. Roadway Description

| | | | | | |
|---|---|---|---|---|---|
| **Route** | | **District** | | **County** | |
| **Begin RP** | | **End RP** | | **Miles** | |
| **Location** | | | | | |

## B. Project Description

| | | | |
|---|---|---|---|
| **Proposed Work** | | | |
| **Project Cost*** | | **Installation Year** | |
| **Project Service Life** | | **Traffic Growth Factor** | |

** exclude Right of Way from Project Cost*

## C. Crash Modification Factor

| | | | |
|---|---|---|---|
| | **Fatal (K) Crashes** | **Reference** | |
| | **Serious Injury (A) Crashes** | | |
| | **Moderate Injury (B) Crashes** | **Crash Type** | |
| | **Possible Injury (C) Crashes** | | |
| | **Property Damage Only Crashes** | | www.CMFclearinghouse.org |

## D. Crash Modification Factor (optional second CMF)

| | | | |
|---|---|---|---|
| | **Fatal (K) Crashes** | **Reference** | |
| | **Serious Injury (A) Crashes** | | |
| | **Moderate Injury (B) Crashes** | **Crash Type** | |
| | **Possible Injury (C) Crashes** | | |
| | **Property Damage Only Crashes** | | www.CMFclearinghouse.org |

## E. Crash Data

| | | | |
|---|---|---|---|
| **Begin Date** | | **End Date** | 0 years |
| **Data Source** | | | |

| **Crash Severity** | **< enter target crashes >** | **< optional 2nd CMF >** |
|---|---|---|
| K crashes | | |
| A crashes | | |
| B crashes | | |
| C crashes | | |
| PDO crashes | | |

## F. Benefit-Cost Calculation

| | | |
|---|---|---|
| $0 | **Benefit (present value)** | **B/C Ratio = N/A** |
| $0 | **Cost** | |

## F. Analysis Assumptions

| Crash Severity | Crash Cost |
|---|---|
| K crashes | $1,360,000 |
| A crashes | $680,000 |
| B crashes | $210,000 |
| C crashes | $110,000 |
| PDO crashes | $12,000 |

**Link:** mndot.gov/planning/program/appendix_a.html

**Real Discount Rate** 1.2%

**Traffic Growth Rate** 0.5%

**Project Service Life** 10 years

## G. Annual Benefit

| Crash Severity | Crash Reduction | Annual Reduction | Annual Benefit |
|---|---|---|---|
| K crashes | 0.00 | #DIV/0! | #DIV/0! |
| A crashes | 0.00 | #DIV/0! | #DIV/0! |
| B crashes | 0.00 | #DIV/0! | #DIV/0! |
| C crashes | 0.00 | #DIV/0! | #DIV/0! |
| PDO crashes | 0.00 | #DIV/0! | #DIV/0! |
| | | | **$0** |

## H. Amortized Benefit

**Total = $0**

| Year | Crash Benefits | Present Value |
|---|---|---|
| 0 | $0 | $0 |
| 0 | $0 | $0 |
| 0 | $0 | $0 |
| 0 | $0 | $0 |
| 0 | $0 | $0 |
| 0 | $0 | $0 |
| 0 | $0 | $0 |
| 0 | $0 | $0 |
| 0 | $0 | $0 |
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| 0 | $0 | $0 |
| 0 | $0 | $0 |
| 0 | $0 | $0 |
| 0 | $0 | $0 |
| 0 | $0 | $0 |

# Appendix F

## Recommended Service Life Criteria

| Description | Service Life (years) |
|---|---|
| **Intersection & Traffic Control** | |
| Construct Turning Lanes | 20 |
| Provide Traffic Channelization | 20 |
| Improve Sight Distance | 20 |
| Install Traffic Signs | 10 |
| Install Pavement Marking | 2 |
| Install Delineators | 10 |
| Install Illumination | 20 |
| Upgrade Traffic Signals | 20 |
| Install New Traffic Signals | 20 |
| Retime Coordinated System | 5 |
| Construct Roundabout | 20 |
| **Pedestrian & Bicycle Safety** | |
| Construct Sidewalk | 20 |
| Construct Pedestrian & Bicycle Overpass/Underpass | 30 |
| Install Fencing & Pedestrian Barrier | 10 |
| Construct Bikeway | 20 |
| Curb extensions and medians | 20 |
| **Structures** | |
| Widen or Modify Bridge for Safety | 20 |
| Replace Bridge for Safety | 30 |
| Construct New Bridge for Safety | 30 |
| Replace/Improve Minor Structure for Safety | 20 |
| Upgrade Bridge Rail | 20 |

| Description | Service Life (years) |
|---|---|
| **Roadway & Roadside** | |
| Widen Traveled Way (no lanes added) | 20 |
| Add Lane(s) to Traveled Way | 20 |
| Construct Median for Traffic Separation | 20 |
| Wide or Improve Shoulder | 20 |
| Realign Roadway (except at railroads) | 20 |
| Overlay for Skid Treatment | 10 |
| Groove Pavement for Skid Treatment | 10 |
| Install Breakaway Sign Supports | 10 |
| Install Breakaway Utility Poles | 10 |
| Relocate Utility Poles | 20 |
| Install Guardrail End Treatment | 10 |
| Upgrade Guardrail | 10 |
| Upgrade or Install Concrete Median Barrier | 20 |
| Upgrade or Install Cable Median Barrier | 10 |
| Install Impact Attenuators | 10 |
| Flatten or Re-grade Side Slopes | 20 |
| Install Bridge Approach Guardrail Transition | 10 |
| Remove Obstacles | 20 |
| Install Edge Treatments | 7 |
| Install Centerline Rumble Strips | 7 |

Source: Federal Highway Administration (FHWA)

# Federal HSIP Funding Application (Form 1)

**INSTRUCTIONS:** Complete and return completed application to Lars Impola, MnDOT, Metro District, 1500 West County Road B2, Roseville, Minnesota 55113. (651) 234-7820. **Applications must be received by 4:30 pm or postmarked on June 1, 2020.*Be sure to complete and attach the Project Information form.** (Form 2)

## I. GENERAL INFORMATION

| | | | |
|---|---|---|---|
| 1. APPLICANT: | | | |
| 2. JURISDICTIONAL AGENCY (IF DIFFERENT): | | | |
| 3. MAILING ADDRESS: | | | |
| CITY: | STATE: | ZIP CODE: | 4. COUNTY: |
| 5. CONTACT PERSON: | TITLE: | | PHONE NO.<br>( ) |
| CONTACT E-MAIL ADDRESS: | | | |

## II. PROJECT INFORMATION

6. PROJECT NAME:

7. BRIEF PROJECT DESCRIPTION - Include location, road name, type of improvement, etc... (A complete description can be submitted separately):

8. HSIP PROJECT CATEGORY – Circle which project grouping in which you wish your project to be scored.

Proactive Reactive

## III. PROJECT FUNDING

9. Are you applying or have you applied for funds from another source(s) to fund this project? Yes ☐ No ☐
If yes, please identify the source(s):

| | |
|---|---|
| 10. FEDERAL AMOUNT*: $ | 13. MATCH % OF PROJECT TOTAL: |
| 11. MATCH AMOUNT: $ | 14. SOURCE OF MATCH FUNDS: |
| 12. PROJECT TOTAL: $ | 15. REQUESTED PROGRAM YEAR(S) : SEE NOTE BELOW**<br>☐ 2024 ☐ 2025 ☐ Either year |
| 16. SIGNATURE: | 17. TITLE: |

***Would you accept a federal award that covers 80% of the total project cost if non-HSIP federal funds were awarded?_____**

****NOTE: If funding becomes available in 2022 or 2023 would this project be able to be advanced to meet this schedule?_____Which years would work?_____**

# PROJECT INFORMATION (Form 2)

(To be used to assign State Project Number after project is selected)

Please fill in the following information as it pertains to your proposed project. Items that do not apply to your project, please label N/A. **Do not send this form to the State Aid Office. For project solicitation package only.**

COUNTY, CITY, or LEAD AGENCY _____

FUNCTIONAL CLASS OF ROAD _____

ROAD SYSTEM _____ (TH, CSAH, MSAS, CO. RD., TWP. RD., CITY STREET)

NAME OF ROAD _____ (Example: 1st Street, Main Avenue)

ZIP CODE WHERE MAJORITY OF WORK IS BEING PERFORMED _____

APPROXIMATE BEGIN CONSTRUCTION DATE (MO/YR) _____

APPROXIMATE END CONSTRUCTION DATE (MO/YR) _____

LOCATION: From: _____

To: _____

(DO NOT INCLUDE LEGAL DESCRIPTION)

TYPE OF WORK _____

_____

(Examples: GRADE, AGG BASE, BIT BASE, BIT SURF, SIDEWALK, CURB AND GUTTER, STORM SEWER, SIGNALS, LIGHTING, GUARDRAIL, BIKE PATH, PED RAMPS, BRIDGE, PARK AND RIDE, ETC)