

# Roadway Reconstruction/Modernization and Spot Mobility – Prioritizing Criteria and Measures

September 20, 2017

**Definition:** A roadway project that does not add thru-lane capacity, but reconstructs, reclaims, or modernizes, or adds new spot mobility elements (e.g., new turn lanes, traffic signal, or roundabout) the facility. 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 and Spot Mobility Projects:**

- Intersection improvements or alternative intersections such as unsignalized or signalized reduced conflict intersections.
- Interchange reconstructions that do not involve new ramp movements or added thru lanes
- ~~Turn lanes (not continuous)~~
- 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 that add multimodal elements
- New alignments that replace an existing alignment and do not expand the number of lanes

## Scoring:

Criteria and Measures	Points	% of Total Points
<b>1. Role in the Regional Transportation System and Economy</b>	<del>175</del> <b>170</b>	<del>15</del> <b>15%</b>
Measure A - <u>Level of Congestion, Principal Arterial Intersection Conversion Study Priorities, and Congestion Management and Safety Plan Opportunity Areas</u>	<del>80</del> <b>65</b>	
<del>Average distance to nearest parallel roadways</del>		
Measure B - Connection to Total Jobs and Manufacturing/Distribution Jobs	<del>30</del> <b>40</b>	
Measure C - <u>Regional Truck Corridor Study Tiers</u> <del>Current daily heavy commercial traffic</del>	<del>50</del> <b>65</b>	
- <del>Measure D – Freight project elements</del>	<del>15</del>	
<b>2. Usage</b>	<b>175</b>	<b>16%</b>
Measure A - Current daily person throughput	110	
Measure B - Forecast 2040 average daily traffic volume	65	
<b>3. Equity and Housing Performance</b>	<b>100</b>	<b>109%</b>
Measure A - Connection to disadvantaged populations and project’s benefits	30	
Measure B - Housing Performance Score	70	
<b>4. Infrastructure Age/Condition</b>	<b>150</b>	<b>1514%</b>
Measure A - Date of construction	50	
Measure B - Geometric, structural, or infrastructure deficiencies	100	
<b>5. Congestion Reduction/Air Quality</b>	<del>75</del> <b>80</b>	<del>7.5</del> <b>8%</b>
Measure A - Vehicle delay reduced	<del>45</del> <b>50</b>	
Measure B - Kg of emissions reduced	30	
<b>6. Safety</b>	<b>150</b>	<b>1514%</b>
Measure A - Crashes reduced	150	
<b>7. Multimodal Elements and Existing Connections</b>	<b>100</b>	<b>109%</b>
Measure A - Transit, bicycle, or pedestrian project elements and connections	100	
<b>8. Risk Assessment</b>	<b>75</b>	<b>7.587%</b>

## Roadway Reconstruction and Modernization

Criteria and Measures	Points	% of Total Points
Measure A - Risk Assessment Form	75	
<b>9. Cost Effectiveness</b>	<b>100</b>	<b>9%</b>
Measure A – Cost effectiveness ( $\frac{\text{total project cost}}{\text{total points awarded}} / \frac{\text{total project cost}}$ )	100	
<b>Total</b>	<b>1,100</b>	

## Roadway Reconstruction and Modernization

**1. Role in the Regional Transportation System and Economy (175-170 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 well it reduces congestion; aligns with the Principal Arterial Intersection Conversion Study and Congestion Management and Safety Plan IV; fulfills its functional classification role, serves heavy commercial traffic, and connects to employment, and manufacturing/distribution-related employment, and post-secondary students; and aligns with the Regional Truck Corridor Study.

A. **MEASURE:** Address how the project may provide relief for congested parallel routes, route fulfills its role in the regional transportation system and how the project area is prioritized in the Principal Arterial Intersection Conversion Study or the latest Congestion Management and Safety Plan. Respond as appropriate to one type of functional classification to each of the three sub-sections below. Projects will get the highest score of the three sub-section sections.

### **Congestion on Parallel Routes:**

The measure will analyze the level of congestion on the parallel A-minor arterial or principal arterial to determine the importance of the roadway in reducing congestion on the Regional Highway System. Council staff will use Streetlight travel speed data on an applicant-selected parallel route to the proposed project. The analysis will compare the peak hour travel speed on a parallel route to free-flow conditions on this same route to see whether the proposed project could relieve congestion on the parallel route too. The applicant must identify the parallel corridor as part of the response.

#### *RESPONSE (Calculation):*

- Parallel Corridor: \_\_\_\_\_
- Parallel Corridor Start and End Points: \_\_\_\_\_
- Free-Flow Travel Speed (Council Staff): \_\_\_\_\_
- Peak Hour Travel Speed (Council Staff): \_\_\_\_\_
- Percentage Decrease in Travel Speed in Peak Hour Compared to Free-Flow (Council Staff): \_\_\_\_\_

### **Principal Arterial Intersection Conversion Study:**

The measure relies on the results on the Principal Arterial Intersection Conversion Study, which prioritized non-freeway principal arterial intersections.

Use the final study report for this measure: [metro council.org/PAICS](http://metro council.org/PAICS)

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

- Proposed at-grade project that reduces delay at a High Priority Intersection:  (65 Points)
- Proposed at-grade project that reduces delay at a Medium Priority Intersection:  (55 Points)
- Proposed at-grade project that reduces delay at a Low Priority Intersection:  (45 Points)
- Not listed as a priority in the study:  (0 Points)

## Roadway Reconstruction and Modernization

### Congestion Management and Safety Plan IV:

The measure relies on the results on MnDOT's Congestion Management and 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 draft 2040 Transportation Policy Plan (2018).

RESPONSE (Select one for your project):

- Proposed at-grade project that reduces delay at a CMSP opportunity area:  (65 Points)
- Not listed as a CMSP priority location:  (0 Points)

### SCORING GUIDANCE (80-65 Points)

Expanders, Augmentors, Connectors, and Non-Freeway Principal Arterials: The applicant with the furthest average distance from the closest parallel A-Minor Arterials or Principal Arterials on both sides will receive the full points. The furthest average distance will be considered separately for Expanders, Augmentors, Connectors, and Non-Freeway Principal Arterials. Due to the three scoring methods, more than one project can score the maximum points. ~~mapa~~ 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 on Parallel Routes: The applicant with the with the most congestion on a 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 parallel route relative to free flow conditions and the top project had a 10% reduction, this applicant would receive  $(5/10)*65$  points, or 33 points. ~~Relievers: The applicant with the highest number of hours per day in which current capacity exceeds the design capacity on the Principal Arterial will receive the full points. Remaining Reliever projects will receive a proportionate share of the full points, calculated as described above.~~ n

The scorer will have discretion in determining whether the applicant selected the correct parallel A-minor arterial or principal arterial (and location on that segment).

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 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 three scores out of a maximum of 65 points.

## Roadway Reconstruction and Modernization

**Note: Due to the use of multiple sub-sections, three applicants may receive the full 65 points.**

**A.B.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.

Upload the “Regional Economy” map used for this measure.

**RESPONSE (Data from the “Regional Economy” map):**

- Existing Employment within 1 Mile: \_\_\_\_\_ (Maximum of ~~30~~40 points)
- Existing Manufacturing/Distribution-Related Employment within 1 Mile: \_\_\_\_\_ (Maximum of ~~30~~40 points)
- Existing Post-Secondary Students: \_\_\_\_\_ (Maximum of ~~18~~24 points)

## Roadway Reconstruction and Modernization

### SCORING GUIDANCE (~~30-40~~ 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  $(1,000/1,500) * \del{30-40} points or ~~20-27~~ points.$

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  $(1,000/1,500) * \del{30-40} points or ~~20-27~~ points.$

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  $(1,000/1,500) * \del{18-24} points or ~~12-16~~ points.$

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 ~~30-40~~ points.

Note: Due to the use of multiple sub-measures, two applicants will receive the full ~~30-40~~ points.

**C. 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. (~~65 points~~)

Use the final study report for this measure:

<https://metrocouncil.org/Transportation/Planning-2/Transit-Plans,-Studies-Reports/Highways-Roads/Truck-Freight-Corridor-Study.aspx>

**RESPONSE** (Select one for your project, based on the [Regional Truck Corridor Study](#):)

- [Along Tier 1:](#)  (~~65 Points~~)
- [Along Tier 2:](#)  (~~45 Points~~)
- [Along Tier 3:](#)  (~~25 Points~~)
- The project provides a direct and immediate connection (i.e., intersects) with either a Tier 1, Tier 2, or Tier 3 corridor:  (~~10 Points~~)
- None of the tiers:  (~~0 Points~~)