



MEMORANDUM

TO: Transportation Planning Committee
FROM: East-West Gateway Staff
DATE: August 31, 2017
SUBJECT: Wednesday, September 6, 2017 meeting

The next meeting of the joint Illinois/Missouri Transportation Planning Committee (TPC) is scheduled for **Wednesday, September 6, 2017 at 2:00 p.m. at East-West Gateway Council of Governments offices.** (Reminder parking is available at Stadium-East Garage)

If you have any questions or concerns regarding the enclosed materials or the upcoming meeting please contact EWGCOG. The agenda for the meeting is as follows:

AGENDA

1. Call to order
2. Great Streets Initiative – Illinois (discussion item), Paul Hubbman, EWG
3. Draft scoring criteria for Surface Transportation Block Grant Program project applications (discussion item), Jason Lange, EWG
4. Other Business
 - Next meeting (combined MO/IL TPC) scheduled for Wednesday October 4, 2017 at 2 PM

John Griesheimer
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Franklin County

Mark A. Kern
Chairman, St. Clair County Board

Steve Stenger
County Executive
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Steve Ehlmann
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Lyda Krewson
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Kurt Prenzler
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Ken Waller
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Jefferson County

Chuck Caverly
St. Louis County Municipal League

Jason Fulbright
Jefferson County

Emeka Jackson-Hicks
Mayor, City of East St. Louis

Reggie Jones
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Mark Kupsky
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Roy Mosley
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Michael Walters
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John White
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Regional Citizens
Barbara Geisman
C. William Grogan
Richard Kellett
John A. Laker
Kristen Poshard

Erin Aleman
Illinois Department of
Transportation

Erika Kennett
Illinois Department of Commerce
and Economic Opportunity

Patrick McKenna
Missouri Department of
Transportation

John Nations
Bi-State Development

James M. Wild



EAST-WEST GATEWAY Council of Governments

Creating Solutions Across Jurisdictional Boundaries

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James M. Wild

To: Transportation Planning Committee

From: East-West Gateway Staff

Date: August 31, 2017

Subject: Draft Scoring Criteria for Local Program Application – Surface Transportation Block Grant Program (STP-S)

Background

The current transportation law, Fixing America’s Surface Transportation (FAST) Act, continues the reforms begun by the previous law, Moving Ahead for Progress in the 21st Century (MAP-21). This includes transitioning to a performance-driven, outcome-based program, and the establishment of performance goals for Federal-aid highway programs (23 USC 150).

Performance-based planning and programming ensures that resources are invested in projects that make progress toward achieving critical outcomes for the region.

As the Metropolitan Planning Organization for the St. Louis region, East-West Gateway Council of Governments (EWG) is charged with developing a performance-based long-range transportation plan, as well as a corresponding project evaluation structure for developing the Transportation Improvement Program (TIP) (23 USC 134 (j)).

Projects in the TIP must be consistent with the investment priorities (i.e., the ten guiding principles) of *Connected2045*, the long-range transportation plan for the St. Louis region, and link the priorities to the performance goals. These investment priorities guide transportation system evaluation and decision making, which includes the selection of the Surface Transportation Block Grant Program (STP-S) projects. STP-S provides flexible funding that may be used by local governments for projects to preserve and improve the conditions and performance on any Federal-aid highway, bridge project on any public road, pedestrian and bicycle infrastructure, and transit capital projects.

The policies in *Connected2045* reflect regional and national goals and guide the prioritization of federal funding for all modes of transportation, including roads, bridges, public transportation, freight, bicycle, pedestrian, and paratransit. To align with the goals of *Connected2045*, EWG is revising the project application and selection process for the STP-S program to ensure that projects of all types are considered equally for funding and are selected through a performance-driven approach.

STP-S Scoring Criteria Development

In August 2016, EWG convened six focus groups consisting of representative regional experts. The focus groups were organized by project application type: road and bridge infrastructure, traffic flow, safety, active transportation, transit, and freight and economic development. Two meetings were held for each focus group to discuss criteria pertaining to the application type

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and to provide feedback to EWG. Feedback was also accepted from regional experts who were not able to attend the focus group meetings. The feedback from the focus groups was incorporated into the draft scoring criteria.

In September 2016, the draft scoring criteria were presented to the Missouri and Illinois Transportation Planning Committee (TPC) and the Bicycle and Pedestrian Advisory Committee (BPAC). The TPC and BPAC provided feedback to staff on the draft scoring criteria. The revised draft scoring criteria were presented to the TPC at their October 2016 meeting.

STP-S Test Evaluation

EWG staff administered a STP-S test evaluation of the projects submitted for funding during the FY 2018-2021 TIP cycle. This enabled staff to determine if the evaluation was working as intended. EWG revised the STP-S application to include questions pertaining to the draft scoring criteria. The STP-S application was available on December 1, 2016 and due on March 2, 2017. EWG staff evaluated the projects based on the FY 2018-2021 TIP evaluation criteria and the funding recommendations were made by the TPC in May 2017. After the TPC made their STP-S project recommendations, EWG staff started the test evaluation using the draft scoring criteria. After the test evaluation was complete, staff was able to determine what was working with the criteria and what needed to be modified. Revisions were made to the draft scoring criteria, and all project applications were rescored.

STP-S Draft Scoring Criteria Comments

The updated draft scoring criteria and the findings from the test evaluation were presented to the TPC on August 2, 2017. Staff requested TPC representatives to comment on the draft scoring criteria by August 23, 2017, and comments from two members were received. The comments are provided in **Attachment A**.

Modifications to Draft Scoring Criteria

Based on the feedback received from the TPC, staff made modifications to the draft scoring criteria. The modifications are described below:

- The points allocated for the PASER rating were adjusted in the road project type application. The metric still prioritizes roads with a poor to fair pavement condition, however, EWG recognizes that federal funds for construction are not available until 3-4 years after project application approval. The points for projects that are improving these roads before the condition requires more costly improvements have been increased to reflect good practices in pavement management. The adjustments are shown below:

Average PASER rating:	Proposed Criteria (Aug 2017):	Proposed Modification:
1.6-4.5	60	60
4.6-5.5	55	57
5.6-7.5	45	53
1.5 or less	35	40
7.6-8.5	25	30
8.6-10	0	0

- In the bridge application, the points allocated for the bridge sufficiency rating were adjusted to account for the modifications to the road condition measure. The adjustments are shown below:

Bridge sufficiency rating:	Proposed Criteria (Aug 2017):	Proposed Modification:
0-39.9	60	60
40-49.9	50	55
50-59.9	40	45
60-79.9	30	30
80-100	0	0

- The Support Public Transportation and Provide More Transportation Choices criteria were combined in the road, bridge, traffic flow, safety, and freight project types to create a ‘multimodal’ category. The proposed criteria affected projects that were located in rural environments with no public transportation. By combining the two criteria, projects do not receive points for exclusive transit improvements, rather points are aggregated to a maximum point score depending on the proposed multimodal features. The maximum score is dependent on the project type. This “catalog of multimodal features” includes transit improvements, low-stress environments for walking and biking, access to schools, and streetscape safety elements.
- In the active transportation application, the points allocated for the Support Public Transportation criterion were reduced from eight points to five points. This is to account for our rural environments with no public transportation. The three points were added to the Support Neighborhoods & Communities criterion. The adjustments are described below:
 - Access to Community Resources: Increased from two points to three points for projects providing direct access to a community resource.
 - Planning: Increased from three points to five points for projects that are specifically prioritized in a planning document. Increased from one point to two points for projects that are consistent with a planning document or Complete Streets Policy.
- Under the draft scoring criteria, projects can receive up to six points for cost, which is 5.5% of the total points available. The existing STP-S project evaluation criteria tends to emphasize projects with a lower cost (federal cost in Missouri and total construction cost in Illinois), regardless of how well a project scored in its priority area. This type of methodology is not consistent with federal transportation requirements, which includes investing in projects that make progress towards achieving desired performance outcomes for the region. EWG is proposing that a project can receive no more than 20% of the available federal funds during each funding round.

STP-S Draft Scoring Criteria

Project sponsors can apply for STP-S funds through seven different application types: road, bridge, traffic flow, safety, active transportation, transit (asset management & system upgrades and expansion), or freight/economic development. Each project is evaluated based on how well it meets the priority criteria established in *Connected2045*. The table on the following page details the performance criteria values for each project type:

	STP-S Project Type							
	Road	Bridge	Traffic Flow	Safety	Active Transportation	Transit Asset Management & System Upgrades	Transit Expansion	Freight / Economic Development
Connected2045 Investment Priority Criteria								
Preserve & Maintain the Existing System	62	62	5	5	-	45	-	5
Multimodal: Support Public Transportation / Provide More Transportation Choices	15	12	11	15	32	24	64	10
Support Neighborhoods & Communities	4	4	4	5	20	8	8	4
Foster a Vibrant Downtown & Central Core	-	-	1	-	10	3	3	-
Promote Safety	8	13	10	70	35	5	5	10
Support a Diverse Economy with a Reliable System	1	-	50	-	-	5	5	10
Support Quality Job Development	4	4	4	-	-	-	5	10
Strengthen Intermodal Connections	5	5	5	5	-	-	-	50
Protect Air Quality & Environmental Assets	1	-	10	-	3	10	10	1
Total Performance Points	100	100	100	100	100	100	100	100

Each project type can receive a maximum of 100 performance points. Each project type has a primary purpose that includes the measures and metrics that are most important to the project type. For example, the measure that has the most amount of points in the road project type is the pavement condition, worth 60 points. Road projects then earn points under a value-added approach, gaining points in multimodal accommodations, Environmental Justice, safety improvements, improved facility efficiency, job access, enhancements to freight movement, and environmental quality.

Project usage and cost points will be included in the final scoring for each project, which is worth an additional 10 points. Projects can receive up to four points for usage and up to six points for cost. More information on the updated STP-S draft scoring criteria is included in **Attachment B**. The modifications are highlighted in yellow.

Next Steps

EWG will continue to accept feedback on the draft scoring criteria from the TPC. Please submit comments by September 15, 2017. EWG will convene the Missouri and Illinois TPC on October 4, 2017 to approve the draft scoring criteria. The draft scoring criteria will be submitted to the Board of Directors at its October 25, 2017 meeting for final approval.

Attachment A

Jefferson County

1. Preserve and maintain the Existing System (Applies to all Project Types, Heavier influence in "Roads" Type)
 - To be consistent with US Code, and current law, a project performance measure is "To maintain the highway infrastructure asset system in a state of good repair." (150 (b)2)
 - 5326 (b)1 States that "a definition of the term "state of good repair" that includes objective standards for measuring the condition of capital assets of recipients, including equipment, rolling stock, infrastructure, and facilities;"
 - In the past, current, and proposed TIP evaluation criteria, E/W Gateway references the PASER pavement rating method as a reasonable guideline for evaluating existing pavement condition
 - Using the Road Condition under a Road Project Type, the proposed criteria assigns ranking, or "points" for the following conditions: 60 points for ratings of 1.6-4.5, 55 points for ratings of not 4.6-5.5, 45 points for ratings of 5.6-7.5, 35 points for ratings of 1.5 or less, 25 points for ratings of 7.6-8.5, and zero points for ratings of 8.6-10.0 -The PASER Rating Manual Identifies any pavement with a rating of 4 or less as "Fair" Condition, and states "Structural Improvement Required."

Summary Comment: The proposed criteria awards the highest points to those that allow their pavement to deteriorate to the point of requiring structural repair. This is counterproductive to the goal of "maintain the highway infrastructure asset system in a state of good repair."

Additionally, applications are ranked on their current PASER Rating. 3-4 years from then, when the funds become available and the project is implemented, the pavement has deteriorated further. Pavements that were a 5, could be a 4 or 3 by the time the project is implemented. At that point, a preservation treatment is a complete waste of money, and will not extend the life of the pavement because the damage has already been done. Pavement preservation should be given top priority because it is consistent with the performance goal. Overlays are eventually necessary, regardless of preventative maintenance. For this condition, an applicant should be able to earn the highest points by proving that a road was maintained, and that it is just that time to perform the structural repair. Pavement degrades at an exponential rate and inversely related to increasing cost of repair.

2. Point based project raking and cost-effectiveness:
 - The proposed criteria ranks projects by points (110) that represent a project's performance measures
 - Cost-benefit is converted to points, and weighs on the overall score (1% to 5% weight, excepting the Safety Type, which includes cost-benefit in another calculation)

Summary Comment: While it makes sense to reward those that meet the performance measures that the grant is intended for, this method of selection is a polar opposite of the current selection methodology, and will allow the opposite to occur. This means that projects will now rank higher if an applicant includes features that may not even be relevant to the needs of the public in that area. Furthermore, just one massive project could consume all of the available money for the entire region because it scored highest. Usage and Cost-Effectiveness should represent half of the points to justify the project's needs.

3. In Summary: We understand that updates are needed to the selection process. The proposed criteria could, or will effectively block suburban and rural communities from receiving any federal dollars for

transportation projects (Other than bridges. That appears to work). It will allow large scale, urban projects to suck up all of the regional dollars. These projects could end up being frivolous, or contain many wants/desires, and still rank above other projects that are of a preservation type. A fictitious example would be that I could turn in an application to revitalize a downtown cobblestone street. I could specify gold bricks, instead of standard paver bricks, because I would lose only a maximum of 4% of my potential points.

City of St. Louis

Thank you for allowing me to comment on the new STP-S scoring criteria. As I commented at the TPC meeting, I am concerned about how urban streetscape projects would be categorized. Rachael mentioned that this type of project would be categorized into the Road category, however, this could be problematic.

More specifically, an urban streetscape project would compete head to head with a rural asphalt mill and overlay project. Urban streetscape projects are short while overlay projects are longer with a much greater amount of person miles traveled. Also, the Road category is heavily weighted for asphalt paving (up to 60 points). What if the streetscape project paving is in relatively good shape? It would be hard to overcome the loss or potential paving points in other point categories. And, paving is a relatively minor and smaller cost project component compared to other streetscape elements. Plus there are no additional points available for an Urban Core Project as there is for Active Transportation category.

Attachment B

STP-S Draft Scoring Criteria – September 2017

The current federal transportation law, Fixing America’s Surface Transportation (FAST) Act, continues the reforms initiated by the previous law, Moving Ahead for Progress in the 21st Century (MAP-21). This includes transitioning to a performance-driven, outcome-based program, and establishing performance goals for federal-aid highway programs. Performance-based planning and programming ensures that resources are invested in projects that make progress toward achieving critical outcomes for the St. Louis region.

The East-West Gateway Council of Governments (EWG) Board of Directors adopted *Connected2045*, the long-range transportation plan (LRP) for the St. Louis region, in June 2015. Projects in the Transportation Improvement Program (TIP) must be consistent with the ten guiding principles of *Connected2045*, which are described in **Table 1**. These ten principles guide transportation system evaluation and decision making, including the competitive selection of the Surface Transportation Block Grant (STP-S) program.

Table 1: *Connected2045* Ten Guiding Principles

Principle	Description
Preserve & Maintain the Existing System	Ensure the transportation system remains in a state of good repair.
Support Public Transportation	Invest in public transportation to spur economic development, protect the environment, and improve quality of life.
Support Neighborhoods & Communities	Connect communities to opportunities and resources across the region.
Foster a Vibrant Downtown & Central Core	Improve access to and mobility within the central core by all modes to increase attractiveness of St. Louis and strengthen the regional economy.
Provide More Transportation Choices	Create viable alternatives to automobile travel by providing bicycle and pedestrian facilities.
Promote Safety & Security	Provide a safe and secure transportation system for all users.
Support a Diverse Economy with a Reliable System	Reduce congestion and improve travel time reliability to support the diverse economic sectors of the region.
Support Quality Job Development	Support the growth of wealth producing jobs that allow residents to save and return money to the economy.
Strengthen Intermodal Connections	Support freight movement and connections that are critical to the efficient flow of both people and goods.
Protect Air Quality & Environmental Assets	Encourage investments that recognize the linkages between the social, economic, and natural fabric of the region.

EWG has identified seven project types that represent a wide variety of projects that sponsors in the St. Louis region implement. These project types are identified below, followed by example activities:

- **Road** – road resurfacing or reconstruction.
- **Bridge** – bridge rehabilitation or replacement, bridge preventative maintenance program.
- **Traffic Flow** – addition of travel lanes, two-way turn lanes, new roads, intersection improvements, Intelligent Transportation Systems (ITS) improvements, signal optimization.
- **Safety** – systemic safety improvements (i.e., guardrail or rumble strip installation), sight distance improvements, signage upgrades, intersection/crossing safety improvements.
- **Active Transportation** – shared-use paths, on-street bicycle facilities, sidewalks, bicycle and pedestrian bridges and underpasses.
- **Transit:**
 - **Transit Asset Management and System Upgrades** – revenue replacement vehicles, improvements to transit facilities, maintenance facility for revenue vehicles
 - **Expansion** – vehicle fleet expansion, geographic expansion

- **Freight/Economic Development** – road or bridge projects that improve the flow of freight or promote economic development, railway-highway grade separation, traffic signal optimization, truck parking facilities.

Each project type will be evaluated based on how it meets the priority criteria established in *Connected2045*. **Table 2** details the performance criteria values for each project type.

Table 2: Project Type and Performance Criteria Values

Connected2045 Investment Priority Criteria	STP-S Project Type							
	Road	Bridge	Traffic Flow	Safety	Active Transportation	Transit Asset Management & System Upgrades	Transit Expansion	Freight / Economic Development
Preserve & Maintain the Existing System	62	62	5	5	-	45	-	5
Multimodal: Support Public Transportation / Provide More Transportation Choices	15	12	11	15	32	24	64	10
Support Neighborhoods & Communities	4	4	4	5	20	8	8	4
Foster a Vibrant Downtown & Central Core	-	-	1	-	10	3	3	-
Promote Safety	8	13	10	70	35	5	5	10
Support a Diverse Economy with a Reliable System	1	-	50	-	-	5	5	10
Support Quality Job Development	4	4	4	-	-	-	5	10
Strengthen Intermodal Connections	5	5	5	5	-	-	-	50
Protect Air Quality & Environmental Assets	1	-	10	-	3	10	10	1
Total Performance Points	100	100	100	100	100	100	100	100

All application submittals are expected to have one primary project type. The component of the project that is most important to the sponsor is considered the primary type. Many of the projects could fall into multiple project types. For example, if a sponsor is planning on resurfacing a road and adding a bicycle lane, the project is considered multimodal. Assuming that the roadway resurfacing is the primary activity, the project would be evaluated as a road project type and can earn points for providing more transportation choices.

All projects will be scored and ranked based on the primary project type indicated by the project sponsor. Each project type has a maximum of 10 criteria and up to 14 metrics that are used to assign performance points. Certain criteria do not apply to all project types. For example, a road project type would be assessed for nine out of the 10 criteria (12 metrics) and an active transportation project type would be assessed for six out of the 10 criteria (13 metrics). The criteria are held constant across the project types, however, the measures and metrics vary depending on the project type. In addition, criterion can contain multiple measures and metrics.

Each project type can receive a maximum of 100 performance points. Each project type has a primary purpose that include the measures and metrics that are most important to the project type. For example, the measure that has the most amount of points in the road project type is the pavement condition, worth 60 points. Pavement condition is also evaluated in the traffic flow, safety, and freight/economic development project types, but is only worth 5 points. This is because the primary purpose of road type projects is to preserve the roadway. As noted before, the measures and metrics are specific to each project type. All project types compete against each other for the available STP-S funding. Funding is not set aside in silos by project type.

Project usage and cost points will be included in the final scoring of each project, which is worth an additional 10 points. Projects can receive up to four points for usage and up to six points for cost. To determine the ranges used to allocate points for usage and cost, EWG analyzed projects currently in the draft 2018-2021 TIP and arranged the values using the natural breaks classification method. Person Miles of Travel (PMT) will be calculated for each project type to determine the facility usage. Cost points for Missouri projects are based on the federal project cost total. In Illinois, it is based on the construction cost total. **Table 3** shows the usage and cost point breakdown in Missouri. **Table 4** shows the usage and cost point breakdown in Illinois.

Table 3: Usage and Cost Point Breakdown - Missouri

Usage – PMT	Usage Point Allocation	Federal Project Cost	Cost Point Allocation
10,001+	4.0	\$0-\$400,000	6.0
5,001-10,000	3.2	\$400,001-\$650,000	4.8
2,001-5,000	2.4	\$650,001-\$1,000,000	3.6
701-2,000	1.6	\$1,000,001-\$1,300,000	2.4
0-700	0.8	\$1,300,001+	1.2

Table 4: Usage and Cost Point Breakdown - Illinois

Usage – PMT	Usage Point Allocation	Construction Cost	Cost Point Allocation
4,001+	4.0	\$0-\$450,000	6.0
2,001-4,000	3.2	\$450,001-\$550,000	4.8
1,101-2,000	2.4	\$550,001-\$650,000	3.6
501-1,100	1.6	\$650,001-\$750,000	2.4
0-500	0.8	\$750,001+	1.2

Road Project Type

Table 5 outlines the scheme for evaluating road projects. Road projects are assessed for nine out of the 10 criteria and include 12 metrics. No measures were identified for the criteria related to Foster a Vibrant Downtown & Central Core. Further information on the metrics used to evaluate road projects follows.

Table 5: Road Project Type Evaluation Scheme

Connected2045 Investment Priority Criteria	Measure	Metric	Points
<i>Preserve & Maintain the Existing System</i>	Road condition	PASER rating	60
	Significance	Principal arterial	2
<i>Multimodal: Support Public Transportation / Provide More Transportation Choices</i>	Multimodal accommodations	Elements of other modes being implemented as part of the project	15
<i>Support Neighborhoods & Communities</i>	Environmental Justice	Project falls in or partially located in area with a high concentration of: <ul style="list-style-type: none"> a. low-income persons or minority populations b. zero-vehicle households c. seniors or persons with disabilities 	4
<i>Foster a Vibrant Downtown & Central Core</i>	n/a	n/a	n/a
<i>Promote Safety</i>	Improved safety	1. Total crash rate 2. Fatal & serious injury crash rate 3. Safety countermeasure proposed	8
<i>Support a Diverse Economy with a Reliable System</i>	Improved facility efficiency	Management and operations elements	1
<i>Support Quality Job Development</i>	Access to jobs	Job density	4
<i>Strengthen Intermodal Connections</i>	Regional freight significance	1. Freight proximity 2. Commercial vehicle countermeasures	5
<i>Protect Air Quality & Environmental Assets</i>	Impact to the environment	Environmental infrastructure elements	1

Preserve & Maintain the Existing System (62 total points)

Projects will be assessed in terms of how they contribute to the preservation of existing infrastructure assets. The first metric evaluates the condition of the pavement. The second metric evaluates the project’s significance to the National Highway System.

Road Condition (60 points)

Pavement condition will be assessed using the Pavement Surface Evaluation and Rating (PASER) Guide, which is a visual rating system. PASER ratings range from 1-10, with 1 being ‘very poor’ condition and 10 being ‘excellent’ condition. Facilities with a PASER rating of 1.5 or less are assigned a lower priority to encourage preventative maintenance prior to this level of deterioration. Examples of the types of improvements typically used on roadways with different pavement ratings, as well as their associated scores, are listed below. This is meant to be illustrative, and not an exhaustive list of improvements eligible for funding.

- 60 points** PASER 1.6-4.5 – Includes improvements such as mill and overlay, extensive slab replacement, joint rehabilitation, or full-depth pavement repairs.
- 57 points** PASER 4.6-5.5 – Includes project elements that are primarily focused on preservative treatments and non-structural surface repairs.
- 53 points** PASER 5.6-7.5 – Includes project elements that are primarily focused on preservative treatments, non-structural surface repairs, routine sealing, and minor patching of pavement to prevent further deterioration.
- 40 points** PASER 1.5 or less – Includes full reconstruction of the facility, regardless of pavement condition. Reconstruction may be due to deterioration or deficient design.
- 30 points** PASER 7.6-8.5 – Includes standard roadway maintenance.

Zero points PASER 8.6-10 – Includes pavement in new or like-new condition with no maintenance required.

Non-Interstate National Highway System Route (2 points)

MAP-21 expanded the National Highway System (NHS) to include all principal arterials. This measure evaluates the project's strategic significance.

2 points Project is on a principal arterial.

Zero points Project is not on a principal arterial.

Multimodal: Support Public Transportation / Provide More Transportation Choices (15 total points)

This measure relates to *Connected2045's* goal of fostering a multimodal transportation system. Incorporating bicycle and pedestrian facilities in road projects is an efficient and cost-effective way for communities to create multimodal networks. In addition, road projects can provide multiple benefits to public transit, including better mobility for transit vehicles and better access for users of all ages and abilities. Projects can score up to 15 points for the following features existing and being retained, or being included in and newly constructed by the project:

- 3 points** Project is located on a transit route; OR 1 point if project intersects a transit route
- 2 points** Includes physical improvements to transit system (benches, ADA landing pads, shelters, etc.)
- 1 point** New or upgraded sidewalk connections to transit
- 3 points** Bicycle and/or pedestrian facility directly touching school property; OR 1 point if bicycle and/or pedestrian facility is within ½-mile of school
- 6 points** Corrects existing sidewalk deficiencies (deficiencies = poor sidewalk conditions or existing width ≤ 4') or new 5' sidewalks (residential) or 8' sidewalks (commercial) on both sides of road
- 4 points** New or upgraded 5' sidewalks (residential) or 8' sidewalks (commercial) on one side of road
- 1 point** Reconstruction of curb ramps
- 8 points** 10' shared-use path; OR 6 points for 8' shared-use path
- 6 points** Physically protected or buffered on-street bicycle facility
- 4 points** Conventional bike lanes on roads at 30 mph or less; OR 2 points for conventional bike lanes on roads at 35 mph
- 4 points** 5'-8' paved shoulders; OR 1 point for 4' paved shoulders
- 1 point** Shared-lane markings on roads at 25 mph or less
- 1 point** Traffic calming solutions to reduce modal conflicts (bulb outs, raised crosswalks, refuge islands, etc.)
- 1 point** Pedestrian-scale lighting
- 1 point** Crossing treatments at intersections or uncontrolled locations (pedestrian signals, pedestrian flashing beacons, marked crosswalks, high visibility crosswalks, bicycle intersection crossing markings, etc.)
- 1 point** Street trees and/or landscaped buffer between roadway and sidewalk

Support Neighborhoods & Communities (4 total points)

This measure is included to account for projects that are located in Environmental Justice (EJ) areas. The purpose of EJ is to focus federal attention on the environmental and human health effects of federal actions on minority or low-income populations with the goal of achieving environmental protection for all communities. EWG further expands on EJ to include areas with a high concentration of one or more of: zero-vehicle households, elderly, and persons with a disability. The EJ policy ensures that populations that have traditionally been underserved have safe

access to community resources and meaningful choices in transportation. Census data and GIS analysis is used to determine if the project is located in an EJ area. A map of the EJ areas is provided in **Appendix A**.

4 points	Project falls in, or partially in, an EJ area with high concentration of low-income persons, or minorities.
3 points	Project falls in, or partially in, an EJ area with high concentration of zero-vehicle households.
1 point	Project falls in, or partially in, an EJ area with high concentration of seniors or persons with a disability.
Zero points	Project is not located in an EJ area <u>OR</u> project imposes a burden on EJ area.

Projects that are located within EJ areas will not earn points if they impose a burden on the population of the area. Burdens may include disruption of community cohesion (i.e., access to schools, parks, medical facilities, and religious institutions), adverse employment effects, decline in tax base or property values, displacements, increased noise and/or emissions, diminished aesthetics, and disruption to businesses, or access to transit.

Promote Safety (8 total points)

EWG is focusing on lowering the number of fatalities and serious injuries caused by vehicle crashes. To meet this goal, all projects should strive to correct safety issues in high crash locations or use a systemic approach to address future crashes. The two metrics relate to the current conditions on the roadway by looking at the total crash rate and the fatal and serious injury crash rate. This helps prioritize projects that are in locations experiencing a current problem. The third metric addresses the stated safety problem with an appropriate safety countermeasure.

Project sponsors must use five years of crash data (2011-2015) when calculating the total crash rate and the fatal and serious injury crash rate. Sponsors should use the number of fatal and serious injury crashes and not the total number of fatalities or serious injuries. To receive points under metric one and metric two, the project must include a safety countermeasure that addresses the current safety problem.

Total Crash Rate (4 points)

EWG will group all projects that have crashes into quartiles and assign points as follows:

4 points	Top quartile
3 points	Second quartile
2 points	Third quartile
1 point	Lowest quartile

Fatal and Serious Injury Crash Rate (4 points)

EWG will group all projects that have crashes into quartiles and assign points as follows:

4 points	Top quartile
3 points	Second quartile
2 points	Third quartile
1 point	Lowest quartile

Note: If an *intersection* project is in the lowest quartile in both metric one and metric two, and the project includes a safety countermeasure that addresses the safety problem, the project can receive four total points. Also, if a

project has no crashes on the project limits, but includes a preventative safety countermeasure, the project can receive four total points.

Support a Diverse Economy with a Reliable Transportation System (1 total point)

Management and operations (M&O) strategies are defined as integrated strategies to optimize the performance of existing infrastructure through the implementation of multimodal and intermodal, cross-jurisdictional systems, services, and projects designed to preserve capacity and improve security, safety, and reliability of the transportation system. Examples of M&O strategies include: traffic operational improvements, ITS technologies, or other integrated technology component to increase facility efficiency and reliability. This metric evaluates the integration of M&O strategies into roadway projects.

- 1 point** Project includes M&O strategies.
- Zero points** Project does not include M&O strategies.

Support Quality Job Development (4 total points)

Access to jobs is an important function of the transportation system. The *OnTheMap* tool is derived from census data and will be used to assess where workers are employed in the region. Employment density will be used as a metric in determining how important improvements to transportation facilities are in the surrounding area.

- 4 points** High jobs/sq. mile
- 3 points** Medium-high jobs/sq. mile
- 2 points** Medium jobs/sq. mile
- 1 point** Medium-low jobs/sq. mile
- Zero points** Low jobs/sq. mile

Strengthen Intermodal Connections (5 total points)

The St. Louis region is well positioned to capture some of the expected growth in nationwide freight movement for all modes, given the region’s central location, rivers, low traffic congestion, and lack of tolling. Future growth will depend on coordinating public and private freight decision making and investments, ensuring reliable truck travel times, strengthening multi-modal connections to key industrial site areas, and ensuring the region’s workforce can access freight employment opportunities. A map of the industrial site areas and the Primary Highway Freight System is provided in **Appendix A**.

Freight Proximity (3 points)

In 2013, EWG completed the St. Louis Regional Freight Study. The Study identified key industrial areas that influence the freight industry in the St. Louis region. Industrial site areas are centers of employment and are connected by a series of transportation networks. Projects that improve mobility to an industrial site area, connect to the Primary Highway Freight System, or connect to an intermodal facility will earn points under this metric.

- 3 points** The project meets one of the following criteria:
 - Located within one of 23 key industrial site areas.
 - Connects to the Primary Highway Freight System.
 - Connects to an intermodal freight facility, serves a major freight generator, logistic center, manufacturing and warehouse industrial land, or navigable waterway or Port District.

Commercial Vehicle Countermeasure (2 points)

To earn points under this metric, the project must score points under the first metric, freight proximity, and include a commercial vehicle countermeasure that improves freight movement. Common techniques related to commercial vehicle accommodations include improving shoulder width and pavement structure, intersection design, parking, acceleration/deceleration lanes, and truck and car separation.

2 points The project addresses the stated freight problem with appropriate commercial vehicle countermeasures.

Protect Air Quality & Environmental Assets (1 total point)

Transportation projects should limit the impacts on the natural environment. Green infrastructure is a design approach to managing stormwater, the urban heat island effect, public health, and air quality. Sustainable stormwater management treats and slows runoff from impervious roadways, sidewalks, and building surfaces. Examples of green infrastructure include bioswales, rain gardens, pervious strips, pervious pavement, and green bulb-outs. This metric evaluates the integration of green infrastructure into roadway projects.

1 point Project includes green infrastructure elements.

Zero points Project does not include green infrastructure.

Bridge Project Type

Table 6 outlines the scheme for evaluating bridge projects. Bridge projects are assessed for seven out of the 10 criteria and include 8 metrics. No measures were identified for the criteria related to Foster a Vibrant Downtown & Central Core, Support a Diverse Economy with a Reliable System, and Protect Air Quality & Environmental Assets. Further information on the metrics used to evaluate bridge projects follows.

Table 6: Bridge Project Type Evaluation Scheme

Connected2045 Investment Priority Criteria	Measure	Metric	Points
Preserve & Maintain the Existing System	Bridge condition	Bridge sufficiency rating	60
	Significance	Principal arterial	2
Multimodal: Support Public Transportation / Provide More Transportation Choices	Multimodal accommodations	Elements of other modes being implemented as part of the project	12
Support Neighborhoods & Communities	Environmental Justice	Project falls in or partially located in area with a high concentration of: <ul style="list-style-type: none"> a. low-income persons or minority populations b. zero-vehicle households c. seniors or persons with disabilities 	4
Foster a Vibrant Downtown & Central Core	n/a	n/a	n/a
Promote Safety	Improved safety	1. Structurally deficient 2. Functionally obsolete	13
Support a Diverse Economy with a Reliable System	n/a	n/a	n/a
Support Quality Job Development	Access to jobs	Job density	4
Strengthen Intermodal Connections	Regional freight significance	Bridge weight limits	5
Protect Air Quality & Environmental Assets	n/a	n/a	n/a

Preserve & Maintain the Existing System (62 total points)

Projects will be assessed in terms of how they contribute to the preservation of existing infrastructure assets. The first metric evaluates the condition of the bridge. The second metric evaluates the project's significance to the National Highway System.

Bridge Condition (60 points)

Bridge conditions will be assessed using the bridge sufficiency rating system approved by Federal Highway Administration (FHWA). Bridge sufficiency ratings range from 0-100, with 0 being 'completely deficient' and 100 being a 'new' bridge. The ratings are based on several factors, including: width, vertical clearance, load capacity, essentiality for public use, and structural safety.

60 points	Bridge sufficiency rating 0-39.9 (very poor)
55 points	Bridge sufficiency rating 40-49.9 (poor)
45 points	Bridge sufficiency rating 50-59.9 (fair)
30 points	Bridge sufficiency rating 60-79.9 (good)
Zero points	Bridge sufficiency rating 80-100 (excellent)

Non-Interstate National Highway System Route (2 points)

MAP-21 expanded the National Highway System (NHS) to include all principal arterials. This measure evaluates the project's strategic significance.

2 points	Project is on a principal arterial.
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Zero points Project is not on a principal arterial.

Multimodal: Support Public Transportation / Provide More Transportation Choices (12 total points)

This measure relates to *Connected2045's* goal of fostering a multimodal transportation system. Projects can score up to 12 points for the following features existing and being retained, or being included in and newly constructed by the project:

3 points	Project is located on a transit route; OR 1 point if project intersects a transit route
2 points	Includes physical improvements to transit system (benches, ADA landing pads, shelters, etc.)
1 point	New or upgraded sidewalk connections to transit
3 points	Bicycle and/or pedestrian facility directly touching school property; OR 1 point if bicycle and/or pedestrian facility is within ½-mile of school
6 points	Corrects existing sidewalk deficiencies (deficiencies = poor sidewalk conditions or existing width ≤ 4') or new 5' sidewalks (residential) or 8' sidewalks (commercial) on both sides of road
4 points	New or upgraded 5' sidewalks (residential) or 8' sidewalks (commercial) on one side of road
1 point	Reconstruction of curb ramps
8 points	10' shared-use path; OR 6 points for 8' shared-use path
6 points	Physically protected or buffered on-street bicycle facility
4 points	Conventional bike lanes on roads at 30 mph or less; OR 2 points for conventional bike lanes on roads at 35 mph
4 points	5'-8' paved shoulders; OR 1 point for 4' paved shoulders
1 point	Shared-lane markings on roads at 25 mph or less
1 point	Traffic calming solutions to reduce modal conflicts (bulb outs, raised crosswalks, refuge islands, etc.)
1 point	Pedestrian-scale lighting
1 point	Crossing treatments at intersections or uncontrolled locations (pedestrian signals, pedestrian flashing beacons, marked crosswalks, high visibility crosswalks, bicycle intersection crossing markings, etc.)
1 point	Street trees and/or landscaped buffer between roadway and sidewalk

Support Neighborhoods & Communities (4 total points)

This measure is included to account for projects that are located in Environmental Justice (EJ) areas. The purpose of EJ is to focus federal attention on the environmental and human health effects of federal actions on minority or low-income populations with the goal of achieving environmental protection for all communities. EWG further expands on EJ to include areas with a high concentration of one or more of: zero-vehicle households, elderly, and persons with a disability. The EJ policy ensures that populations that have traditionally been underserved have safe access to community resources and meaningful choices in transportation. Census data and GIS analysis is used to determine if the project is located in an EJ area. A map of the EJ areas is provided in **Appendix A**.

4 points	Project falls in, or partially in, an EJ area with high concentration of low-income persons, or minorities.
3 points	Project falls in, or partially in, an EJ area with high concentration of zero-vehicle households.
1 point	Project falls in, or partially in, an EJ area with high concentration of seniors or persons with a disability.
Zero points	Project is not located in an EJ area OR project imposes a burden on EJ area.

Projects that are located within EJ areas will not earn points if they impose a burden on the population of the area. Burdens may include disruption of community cohesion (i.e., access to schools, parks, medical facilities, and religious institutions), adverse employment effects, decline in tax base or property values, displacements, increased noise and/or emissions, diminished aesthetics, and disruption to businesses, or access to transit.

Promote Safety (13 total points)

A bridge with a deficient condition is considered a priority for replacement. Bridge deficiencies can be categorized as structurally deficient and/or functionally obsolete.

Structurally Deficient (8 points)

Structural deficiencies are characterized by deteriorated conditions of significant bridge elements. A structurally deficient designation does not imply that the bridge is unsafe, but could become so and would need to be closed without substantial improvements. Structurally deficient bridges typically require significant maintenance or repair to remain in service and would eventually require major rehabilitation or replacement to address the underlying deficiencies. To be considered structurally deficient, a bridge must meet the following:

- A condition rating of four or less for a deck, superstructure, substructure, or culvert and retaining walls.
- An appraisal rating of two or less for the structural condition or waterway adequacy.

Bridges that are structurally deficient will earn points under this metric.

8 points	The bridge is structurally deficient.
Zero points	The bridge is not structurally deficient.

Functionally Obsolete (5 points)

A bridge is considered functionally obsolete when it does not meet current design standards either because the volume of traffic exceeds the level anticipated when the bridge was constructed and/or relevant design standards have been revised. To be considered functionally obsolete, a bridge must meet the following:

- A condition rating of three or less for deck geometry, underclearances, or approach/roadway alignment.
- An appraisal rating of three or less for the structural condition or waterway adequacy.

Bridges that are functionally obsolete will earn points under this metric.

5 points	The bridge is functionally obsolete.
Zero points	The bridge is not functionally obsolete.

Support Quality Job Development (4 total points)

Access to jobs is an important function of the transportation system. The *OnTheMap* tool is derived from census data and will be used to assess where workers are employed in the region. Employment density will be used as a metric in determining how important improvements to transportation facilities are in the surrounding area.

4 points	High jobs/sq. mile
3 points	Medium-high jobs/sq. mile
2 points	Medium jobs/sq. mile
1 point	Medium-low jobs/sq. mile

Zero points Low jobs/sq. mile

Strengthen Intermodal Connections (5 total points)

In 1975, Congress enacted the Bridge Formula to limit the weight-to-length ratio of a vehicle crossing a bridge. Posted weight limits impact the movement of freight as trucks may have to detour to avoid a weight restricted bridge. Projects that rehabilitate or replace a load-limited bridge to improve freight movement will earn points under this metric.

5 points The bridge has a posted weight limit of at least 20 tons.

3 points The bridge has a posted weight limit between 20.1 and 40 tons.

2 points The bridge has a posted weight limit above 40 tons.

Zero points The bridge does not have a posted weight limit.

Traffic Flow Project Type

Table 7 outlines the scheme for evaluating traffic flow projects. Traffic flow projects are assessed for 10 out of the 10 criteria and include 14 metrics. Further information on the metrics used to evaluate traffic flow projects follows.

Table 7: Traffic Flow Project Type Evaluation Scheme

Connected2045 Investment Priority Criteria	Measure	Metric	Points
<i>Preserve & Maintain the Existing System</i>	Road or bridge condition	PASER rating or bridge sufficiency rating	5
	ITS condition	Preserving ITS components	
Multimodal: Support Public Transportation / Provide More Transportation Choices	Multimodal accommodations	Elements of other modes being implemented as part of the project	11
<i>Support Neighborhoods & Communities</i>	Environmental Justice	Project falls in or partially located in area with a high concentration of: <ul style="list-style-type: none"> a. low-income persons or minority populations b. zero-vehicle households c. seniors or persons with disabilities 	4
<i>Foster a Vibrant Downtown & Central Core</i>	Mobility within central core	Project is located in central core	1
<i>Promote Safety</i>	Improved safety	1. Total crash rate 2. Fatal & serious injury crash rate 3. Safety countermeasure proposed	10
<i>Support a Diverse Economy with a Reliable System</i>	Improved mobility and congestion	Speed or delay improvements	50
<i>Support Quality Job Development</i>	Access to jobs	Job density	4
<i>Strengthen Intermodal Connections</i>	Regional freight significance	1. Freight proximity 2. Commercial vehicle countermeasures	5
<i>Protect Air Quality & Environmental Assets</i>	Impact to the environment	1. Reduction in VOC & NO _x 2. Environmental infrastructure elements	10

Preserve & Maintain the Existing System (5 total points)

Projects will be assessed in terms of how they contribute to the preservation of existing infrastructure assets. The first metric evaluates the condition of the pavement or bridge. Sponsors can score points under preservation if they are improving the condition of the facility. Roadways or bridges with low pavement/sufficiency ratings will receive a higher preservation score. The second metric relates to the replacement of ITS components. If the sponsor receives points in the first metric and the second metric, the scores of the two metrics will be averaged.

Road or Bridge Condition (5 points)

Pavement condition will be assessed using the Pavement Surface Evaluation and Rating (PASER) Guide, which is a visual rating system. PASER ratings range from 1-10, with 1 being 'very poor' condition and 10 being 'excellent' condition.

5 points	PASER 2.5 or less
4 points	PASER 2.6-3.5
3 points	PASER 3.6-5.5
2 points	PASER 6.6-7.5
1 point	PASER 7.6-8.5
Zero points	PASER 8.6-10

Bridge conditions will be assessed using the bridge sufficiency rating system approved by FHWA. Bridge sufficiency ratings range from 0-100, with 0 being 'completely deficient' and 100 being a 'new' bridge. State DOTs calculate the

ratings based on several factors, including: width, vertical clearance, load capacity, essentiality for public use, and structural safety.

5 points	Bridge sufficiency rating 0-39.9 (very poor)
4 points	Bridge sufficiency rating 40-49.9 (poor)
3 points	Bridge sufficiency rating 50-59.9 (fair)
2 points	Bridge sufficiency rating 60-79.9 (good)
Zero points	Bridge sufficiency rating 80-100 (excellent)

ITS Components (5 points)

Project can earn points if existing ITS components will be preserved, repaired, improved, or upgraded (for example: signals, traffic sensors). To receive points, the ITS components must be within the project limits.

5 points	Existing ITS components are inoperable or require repairs, improvements, or upgrades.
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Multimodal: Support Public Transportation / Provide More Transportation Choices (11 total points)

This measure relates to *Connected2045's* goal of fostering a multimodal transportation system. Projects can score up to 11 points for the following features existing and being retained, or being included in and newly constructed by the project:

3 points	Project is located on a transit route; <u>OR 1 point</u> if project intersects a transit route
2 points	Includes physical improvements to transit system (benches, ADA landing pads, shelters, etc.)
1 point	New or upgraded sidewalk connections to transit
3 points	Bicycle and/or pedestrian facility directly touching school property; <u>OR 1 point</u> if bicycle and/or pedestrian facility is within ½-mile of school
6 points	Corrects existing sidewalk deficiencies (deficiencies = poor sidewalk conditions or existing width ≤ 4') or new 5' sidewalks (residential) or 8' sidewalks (commercial) on both sides of road
4 points	New or upgraded 5' sidewalks (residential) or 8' sidewalks (commercial) on one side of road
1 point	Reconstruction of curb ramps
8 points	10' shared-use path; <u>OR 6 points</u> for 8' shared-use path
6 points	Physically protected or buffered on-street bicycle facility
4 points	Conventional bike lanes on roads at 30 mph or less; <u>OR 2 points</u> for conventional bike lanes on roads at 35 mph
4 points	5'-8' paved shoulders; <u>OR 1 point</u> for 4' paved shoulders
1 point	Shared-lane markings on roads at 25 mph or less
1 point	Traffic calming solutions to reduce modal conflicts (bulb outs, raised crosswalks, refuge islands, etc.)
1 point	Pedestrian-scale lighting
1 point	Crossing treatments at intersections or uncontrolled locations (pedestrian signals, pedestrian flashing beacons, marked crosswalks, high visibility crosswalks, bicycle intersection crossing markings, etc.)
1 point	Street trees and/or landscaped buffer between roadway and sidewalk

Support Neighborhoods & Communities (4 total points)

This measure is included to account for projects that are located in Environmental Justice (EJ) areas. The purpose of EJ is to focus federal attention on the environmental and human health effects of federal actions on minority or low-income populations with the goal of achieving environmental protection for all communities. EWG further expands on EJ to include areas with a high concentration of one or more of: zero-vehicle households, elderly, and persons with a disability. The EJ policy ensures that populations that have traditionally been underserved have safe access to community resources and meaningful choices in transportation. Census data and GIS analysis is used to determine if the project is located in an EJ area. A map of the EJ areas is provided in **Appendix A**.

4 points	Project falls in, or partially in, an EJ area with high concentration of low-income persons, or minorities.
3 points	Project falls in, or partially in, an EJ area with high concentration of zero-vehicle households.
1 point	Project falls in, or partially in, an EJ area with high concentration of seniors or persons with a disability.
Zero points	Project is not located in an EJ area <u>OR</u> project imposes a burden on EJ area.

Projects that are located within EJ areas will not earn points if they impose a burden on the population of the area. Burdens may include disruption of community cohesion (i.e., access to schools, parks, medical facilities, and religious institutions), adverse employment effects, decline in tax base or property values, displacements, increased noise and/or emissions, diminished aesthetics, and disruption to businesses, or access to transit.

Foster a Vibrant Downtown & Central Core (1 total point)

The central core serves as the region's primary economic engine. Improving access to and mobility within central core will strengthen the St. Louis regional economy and enhance the quality of life for residents and visitors. Traffic flow projects that are located within the central core will earn points under this metric.

1 point	Project is located within central core (per <i>Connected2045</i>).
Zero points	Project is not located in central core.

Promote Safety (10 total points)

EWG is focusing on lowering the number of fatalities and serious injuries caused by vehicle crashes. To meet this goal, all projects should strive to correct safety issues in high crash locations or use a systemic approach to address future crashes. The two metrics relate to the current conditions on the roadway by looking at the total crash rate and the fatal and serious injury crash rate. This helps prioritize projects that are in locations experiencing a current problem. The third metric addresses the stated safety problem with an appropriate safety countermeasure.

Project sponsors must use five years of crash data (2011-2015) when calculating the total crash rate and the fatal and serious injury crash rate. Sponsors should use the number of fatal and serious injury crashes and not the total number of fatalities or serious injuries. To receive points under metric one and metric two, the project must include a safety countermeasure that addresses the current safety problem.

Total Crash Rate (5 points)

EWG will group all projects with crashes into quartiles and assign points as follows:

5 points	Top quartile
4 points	Second quartile
3 points	Third quartile

2 points Lowest quartile

Fatal and Serious Injury Crash Rate (5 points)

EWG will group all projects with crashes into quartiles and assign points as follows:

5 points Top quartile

4 points Second quartile

3 points Third quartile

2 point Lowest quartile

Note: If an *intersection* project is in the lowest quartile in both metric one and metric two, and the project includes a safety countermeasure that addresses the safety problem, the project can receive points five total points. Also, if a project has no crashes on the project limits, but includes a preventative safety countermeasure, the project can receive five total points.

Support a Diverse Economy with a Reliable Transportation System (50 total points)

Improving congested roadways benefits the movement of people and goods. Projects will be evaluated based on how well they improve travel conditions along a roadway OR intersection. EWG will measure changes in congestion during peak hour through the increase of average speed along a road segment or reduction of average vehicle delay at an intersection.

Speed – Road Segment (50 points)

For road segment projects, points will be assigned based on the increase in average speed during peak hour.

50 points 40%+

40 points 20-39.9%

30 points 10-19.9%

20 points 5-9.9%

Zero points 0-4.9%

Delay – Intersection (50 points)

For intersection projects, points will be assigned based on the reduction in average vehicle delay during peak hour.

50 points 50%+

40 points 40-49.9%

30 points 30-39.9%

20 points 10-29.9%

Zero points 0-9.9%

Support Quality Job Development (4 total points)

Access to jobs is an important function of the transportation system. The *OnTheMap* tool is derived from census data and will be used to assess where workers are employed in the region. Employment density will be used as a metric in determining how important improvements to transportation facilities are in the surrounding area.

4 points	High jobs/sq. mile
3 points	Medium-high jobs/sq. mile
2 points	Medium jobs/sq. mile
1 point	Medium-low jobs/sq. mile
Zero points	Low jobs/sq. mile

Strengthen Intermodal Connections (5 total points)

The St. Louis region is well positioned to capture some of the expected growth in nationwide freight movement for all modes, given the region’s central location, rivers, low traffic congestion, and lack of tolling. Future growth will depend on coordinating public and private freight decision making and investments, ensuring reliable truck travel times, strengthening multi-modal connections to the industrial site areas, and ensuring the region’s workforce can access freight employment opportunities. A map of the industrial site areas and the Primary Highway Freight System is provided in **Appendix A**.

Freight Proximity (3 points)

In 2013, EWG completed the St. Louis Regional Freight Study. The Study identified 23 key industrial areas that influence the freight industry in the St. Louis region. Industrial site areas are centers of employment and are connected by a series of transportation networks. Projects that improve mobility to an industrial site area, connect to the Primary Highway Freight System, or connect to an intermodal facility will earn points under this metric.

3 points	The project meets one of the following criteria: <ul style="list-style-type: none">• Located within one of 23 key industrial site areas.• Connects to the Primary Highway Freight System.• Connects to an intermodal freight facility, serves a major freight generator, logistic center, manufacturing and warehouse industrial land, or navigable waterway or Port District.
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Commercial Vehicle Countermeasure (2 points)

To earn points under this metric, the project must score points under the first metric, freight proximity, and include a commercial vehicle countermeasure that improves freight movement. Common techniques related to commercial vehicle accommodations include improving shoulder width and pavement structure, intersection design, parking, acceleration/deceleration lanes, and truck and car separation.

2 points	The project addresses the stated freight problem with appropriate commercial vehicle countermeasures. Common techniques related to commercial vehicle accommodations include improving:
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Air Quality & Environment Assets (10 total points)

Transportation projects should limit the impacts on the natural environment. The first metric evaluates the incorporation of green infrastructure to reduce environmental impacts. The second metric evaluates the project’s impact on air quality benefits.

Environment (1 point)

Green infrastructure is a design approach to managing stormwater, the urban heat island effect, public health, and air quality. Sustainable stormwater management treats and slows runoff from impervious roadways, sidewalks, and building surfaces. Examples of green infrastructure include bioswales, rain gardens, pervious strips, pervious pavement, and green bulb-outs.

- 1 point** Project includes green infrastructure elements.
- Zero points** Project does not include green infrastructure.

Air Quality (9 points)

A major objective of the transportation planning process is to ensure that the projects in the TIP help to reduce, where possible, and minimize the air quality impacts of transportation projects in accordance with federal, state, and local air quality standards, regulations, and priorities. The St. Louis region is in marginal non-attainment for the 2008 eight-hour ozone standard.

To measure the project's impact on air quality, an analysis will be performed to determine the emissions reduction of the precursors of ground-level ozone formation (volatile organic compounds and oxides of nitrogen).

- 9 points** 0.91 kg/day +
- 7 points** 0.091-0.9 kg/day
- 5 points** 0.036-0.09 kg/day
- 3 points** 0.011-0.035 kg/day
- Zero points** 0-0.01 kg/day

Safety Project Type

Table 8 outlines the scheme for evaluating safety projects. Safety projects are assessed for six out of the 10 criteria and include 10 metrics. No measures were identified for the criteria related to Foster a Vibrant Downtown & Central Core, Support a Diverse Economy with a Reliable System, Job Quality Development, and Protect Air Quality & Environmental Assets. Further information on the metrics used to evaluate safety projects follows.

Table 8: Safety Project Type Evaluation Scheme

Connected2045 Investment Priority Criteria	Measure	Metric	Points
<i>Preserve & Maintain the Existing System</i>	Road or bridge condition	PASER rating or bridge sufficiency rating	5
	ITS condition	Preserving ITS components	
	Safety hardware condition	Preserving safety hardware	
<i>Multimodal: Support Public Transportation / Provide More Transportation Choices</i>	Multimodal accommodations	Elements of other modes being implemented as part of the project	15
<i>Support Neighborhoods & Communities</i>	Environmental Justice	Project falls in or partially located in area with a high concentration of: <ol style="list-style-type: none"> low-income persons or minority populations zero-vehicle households seniors or persons with disabilities 	5
<i>Foster a Vibrant Downtown & Central Core</i>	n/a	n/a	n/a
<i>Promote Safety</i>	Improved safety	<ol style="list-style-type: none"> Total crash rate Fatal & serious injury crash rate Safety countermeasure proposed 	70
<i>Support a Diverse Economy with a Reliable System</i>	n/a	n/a	n/a
<i>Support Quality Job Development</i>	n/a	n/a	n/a
<i>Strengthen Intermodal Connections</i>	Regional freight significance	<ol style="list-style-type: none"> Freight proximity Commercial vehicle countermeasures 	5
<i>Protect Air Quality & Environmental Assets</i>	n/a	n/a	n/a

Preserve & Maintain the Existing System (5 total points)

Projects will be assessed in terms of how they contribute to the preservation of existing infrastructure assets. The first metric evaluates the condition of the pavement or bridge. Sponsors can score points under preservation if they are improving the condition of the facility. Roadways or bridges with low pavement/sufficiency ratings will receive a higher preservation score. The second metric relates to the replacement of ITS components. The third metric relates to the replacement of safety components. If the sponsor receives points in the first metric, second metric, and third metric, the scores of the three metrics will be averaged.

Road or Bridge Condition (5 points)

Pavement condition will be assessed using the Pavement Surface Evaluation and Rating (PASER) Guide, which is a visual rating system. PASER ratings range from 1-10, with 1 being 'very poor' condition and 10 being 'excellent' condition.

5 points	PASER 2.5 or less
4 points	PASER 2.6-3.5
3 points	PASER 3.6-5.5
2 points	PASER 6.6-7.5
1 point	PASER 7.6-8.5

Zero points PASER 8.6-10

Bridge conditions will be assessed using the bridge sufficiency rating system approved by FHWA. Bridge sufficiency ratings range from 0-100, with 0 being 'completely deficient' and 100 being a 'new' bridge. State DOTs calculate the ratings based on several factors, including: width, vertical clearance, load capacity, essentiality for public use, and structural safety.

5 points Bridge sufficiency rating 0-39.9 (very poor)

4 points Bridge sufficiency rating 40-49.9 (poor)

3 points Bridge sufficiency rating 50-59.9 (fair)

2 points Bridge sufficiency rating 60-79.9 (good)

Zero points Bridge sufficiency rating 80-100 (excellent)

ITS Components (5 points)

Project can earn points if existing ITS components will be preserved, repaired, improved, or upgraded (for example: signals, traffic sensors). To receive points, the ITS components must be within the project limits.

5 points Existing ITS components are inoperable or require repairs, improvements, or upgrades.

Safety Hardware (5 points)

Project can earn points if existing safety hardware will be repaired, improved, or upgraded (for example: signage, guardrails, crash cushion). To receive points, the safety hardware must be within the project limits.

5 points Existing safety hardware require repairs, improvements, or upgrades.

Multimodal: Support Public Transportation / Provide More Transportation Choices (15 total points)

This measure relates to *Connected2045's* goal of fostering a multimodal transportation system. Projects can score up to 15 points for the following features existing and being retained, or being included in and newly constructed by the project:

3 points Project is located on a transit route; OR 1 point if project intersects a transit route

2 points Includes physical improvements to transit system (benches, ADA landing pads, shelters, etc.)

1 point New or upgraded sidewalk connections to transit

3 points Bicycle and/or pedestrian facility directly touching school property; OR 1 point if bicycle and/or pedestrian facility is within ½-mile of school

6 points Corrects existing sidewalk deficiencies (deficiencies = poor sidewalk conditions or existing width ≤ 4') or new 5' sidewalks (residential) or 8' sidewalks (commercial) on both sides of road

4 points New or upgraded 5' sidewalks (residential) or 8' sidewalks (commercial) on one side of road

1 point Reconstruction of curb ramps

8 points 10' shared-use path; OR 6 points for 8' shared-use path

6 points Physically protected or buffered on-street bicycle facility

4 points Conventional bike lanes on roads at 30 mph or less; OR 2 points for conventional bike lanes on roads at 35 mph

4 points 5'-8' paved shoulders; OR 1 point for 4' paved shoulders

1 point Shared-lane markings on roads at 25 mph or less

1 point	Traffic calming solutions to reduce modal conflicts (bulb outs, raised crosswalks, refuge islands, etc.)
1 point	Pedestrian-scale lighting
1 point	Crossing treatments at intersections or uncontrolled locations (pedestrian signals, pedestrian flashing beacons, marked crosswalks, high visibility crosswalks, bicycle intersection crossing markings, etc.)
1 point	Street trees and/or landscaped buffer between roadway and sidewalk

Support Neighborhoods & Communities (5 total points)

This measure is included to account for projects that are located in Environmental Justice (EJ) areas. The purpose of EJ is to focus federal attention on the environmental and human health effects of federal actions on minority or low-income populations with the goal of achieving environmental protection for all communities. EWG further expands on EJ to include areas with a high concentration of one or more of: zero-vehicle households, elderly, and persons with a disability. The EJ policy ensures that populations that have traditionally been underserved have safe access to community resources and meaningful choices in transportation. Census data and GIS analysis is used to determine if the project is located in an EJ area. A map of the EJ areas is provided in **Appendix A**.

5 points	Project falls in, or partially in, an EJ area with high concentration of low-income persons, or minorities.
4 points	Project falls in, or partially in, an EJ area with high concentration of zero-vehicle households.
2 point	Project falls in, or partially in, an EJ area with high concentration of seniors or persons with a disability.
Zero points	Project is not located in an EJ area <u>OR</u> project imposes a burden on EJ area.

Projects that are located within EJ areas will not earn points if they impose a burden on the population of the area. Burdens may include disruption of community cohesion (i.e., access to schools, parks, medical facilities, and religious institutions), adverse employment effects, decline in tax base or property values, displacements, increased noise and/or emissions, diminished aesthetics, and disruption to businesses, or access to transit.

Promote Safety (70 total points)

EWG is focusing on lowering the number of fatalities and serious injuries caused by vehicle crashes. To meet this goal, all projects should strive to correct safety issues in high crash locations or use a systemic approach to address future crashes. The two metrics relate to the current conditions on the roadway by looking at the total crash rate and the fatal and serious injury crash rate. This helps prioritize projects that are in locations experiencing a current problem. The third metric addresses the stated safety problem with an appropriate safety countermeasure.

Project sponsors must use five years of crash data (2011-2015) when calculating the total crash rate and the fatal and serious injury crash rate. Sponsors should use the number of fatal and serious injury crashes and not the total number of fatalities or serious injuries. To receive points under metric one and metric two, the project must include a safety countermeasure that addresses the current safety problem.

Total Crash Rate (10 points)

EWG will group all projects with crashes into quartiles and assign points as follows:

10 points	Top quartile
8 points	Second quartile
6 points	Third quartile

4 point Lowest quartile

Fatal and Serious Injury Crash Rate (10 points)

EWG will group all projects with crashes into quartiles and assign points as follows:

10 points Top quartile

8 points Second quartile

6 points Third quartile

4 point Lowest quartile

Note: If an *intersection* project is in the lowest quartile in both metric one and metric two, and the project includes a safety countermeasure that addresses the safety problem, the project can receive ten total points. Also, if a project has no crashes on the project limits, but includes a preventative safety countermeasure, the project can receive ten total points.

Benefit/Cost Analysis (50 points)

This metric compares all of the project’s benefits associated with a countermeasure to the cost of implementing the countermeasure.

50 points Benefit/cost ratio greater than 3.0

47 points Benefit/cost ratio is greater than 2.1 and less than 3.0

45 points Benefit/cost ratio is greater than 1.0 and less than 2.1

40 points * Benefit/cost ratio is greater than 0 and less than 1

Zero points Benefit/cost ratio is equal to 0

* To receive 40 points, the location and/or safety countermeasure must be identified in the state’s strategic highway safety plan OR the respective county strategic highway plan OR a safety study that was completed for the specific project location.

Strengthen Intermodal Connections (5 total points)

The St. Louis region is well positioned to capture some of the expected growth in nationwide freight movement for all modes, given the region’s central location, rivers, low traffic congestion, and lack of tolling. Future growth will depend on coordinating public and private freight decision making and investments, ensuring reliable truck travel times, strengthening multi-modal connections to key industrial site areas, and ensuring the region’s workforce can access freight employment opportunities. A map of the industrial site areas and the Primary Highway Freight System is provided in **Appendix A**.

Freight Proximity (3 points)

In 2013, EWG completed the St. Louis Regional Freight Study. The Study identified key 23 industrial areas that influence the freight industry in the St. Louis region. Industrial site areas are centers of employment and are connected by a series of transportation networks. Projects that improve mobility to an industrial site area, connect to the Primary Highway Freight System, or connect to an intermodal facility will earn points under this metric.

3 points The project meets one of the following criteria:

- Located within one of 23 key industrial site areas.
- Connects to the Primary Highway Freight System.

- Connects to an intermodal freight facility, serves a major freight generator, logistic center, manufacturing and warehouse industrial land, or navigable waterway or Port District.

Commercial Vehicle Countermeasure (2 points)

To earn points under this metric, the project must score points under the first metric, freight proximity, and include a commercial vehicle countermeasure that improves freight movement. Common techniques related to commercial vehicle accommodations include improving shoulder width and pavement structure, intersection design, parking, acceleration/deceleration lanes, and truck and car separation.

2 points

The project addresses the stated freight problem with appropriate commercial vehicle countermeasures.

Active Transportation

Table 9 outlines the scheme for evaluating active transportation projects. Active transportation projects are assessed for six out of the 10 criteria and include 13 metrics. No measures were identified for the criteria related to Preserve & Maintain the Existing System, Support a Diverse Economy with a Reliable System, Job Quality Development, and Strengthen Intermodal Connections. Further information on the metrics used to evaluate active transportation projects follows.

Table 9: Active Transportation Project Type Evaluation Scheme

Connected2045 Investment Priority Criteria	Measure	Metric	Points
Preserve & Maintain the Existing System	n/a	n/a	n/a
Multimodal: Support Public Transportation / Provide More Transportation Choices	Improved transit connections	1. Transit proximity 2. Physical improvements to transit	5
	System connectivity	Multimodal linkages to existing facilities	27
Support Neighborhoods & Communities	Connecting communities to opportunities	1. Project falls in or partially located in area with a high concentration of: a. low-income persons or minority populations b. zero-vehicle households c. seniors or persons with disabilities 2. Access to schools 3. Access to community resources 4. Planning efforts	20
Foster a Vibrant Downtown & Central Core	Multimodal needs of residents and access to employment	Population, employment, retail, and transit density	10
Promote Safety	Bicycle & pedestrian level of stress/comfort	1. Pedestrian/bicycle crashes 2. Pedestrian/bicycle facility type 3. Traffic calming and design improvements 4. Intersection treatments	35
Support a Diverse Economy with a Reliable System	n/a	n/a	n/a
Support Quality Job Development	n/a	n/a	n/a
Strengthen Intermodal Connections	n/a	n/a	n/a
Protect Air Quality & Environmental Assets	Impact to the environment	Environmental infrastructure elements	3

Support Public Transportation / Provide More Transportation Choices (32 total points)

Active transportation projects should enhance connections between neighborhoods and activity centers through access to transit and comprehensive bicycle and pedestrian facilities. The three metrics below will be used to evaluate the project's impact on transit access and connectivity.

Transit Proximity (2 points)

Bicycling and walking are complementary to transit. The Gateway Bike Plan states, "Targeting the provision of safe and convenient bicycle facilities such as lanes, trails, and bicycle parking can increase the service radius of a transit stop." The Federal Transit Administration (FTA) determined in a 2011 policy statement that all pedestrian improvements located within ½-mile and all bicycle improvements located within 3-miles of a public transportation stop or station shall have a *de facto* physical and functional relationship to public transportation.

2 points

Pedestrian project is located within ½-mile OR bicycle project is within 3 miles of a bus stop, transfer center, or station.

Zero points

Project does not satisfy the above.

Physical Improvements to Transit (3 points)

A walking or bicycling trip can be longer if it involves transit. Bus stops that have access via sidewalks and appropriate street crossing locations ensure personal safety for pedestrians who use transit. In addition, improvements to transit infrastructure can encourage seniors or persons with a disability to utilize public transportation. Physical improvements to a bus stop include: sidewalks to transit facilities, removing obstructions blocking access to transit facilities, landing pads, appropriate street crossings near transit facilities, lighting, bus shelters, benches, etc.

3 points	Project includes physical improvements to transit system.
2 points	New or upgraded sidewalk connections to transit.
Zero points	Project does not include physical improvements to transit system.

System Connectivity (27 points)

System connectivity is a factor related to linking or connecting existing pedestrian or bicycle facilities to complete a network. This measure relates to *Connected2045's* goal of providing comprehensive pedestrian and bicycle facilities. The metric evaluates the level of connectivity that the project will provide.

27 points	Project eliminates barrier <u>AND</u> connects on one end.
25 points	Project fills in gaps by linking both ends. Gap = no pedestrian/bicycle facilities <u>OR</u> existing poor (PSR 0-2) sidewalk <u>OR</u> high-stress bicycle facility.
20 points	Project fills in gap by linking both ends. Gap = existing fair (PSR 2-3) sidewalk.
15 points	Project connects on one end (extends or intersects).
10 points	Project is adjacent to existing facility (no connections established, but existing facility is within a ¼-mile radius).
5 points	Project is a new, isolated facility (no existing facility within a ¼-mile radius).

Support Neighborhoods & Communities (17 total points)

Active transportation projects should connect communities to opportunities across the region. The four metrics below will be used to evaluate the project's impact on neighborhoods and communities.

Environmental Justice (6 points)

This measure is included to account for projects that are located in Environmental Justice (EJ) areas. The purpose of EJ is to focus federal attention on the environmental and human health effects of federal actions on minority or low-income populations with the goal of achieving environmental protection for all communities. EWG further expands on EJ to include areas with a high concentration of one or more of: zero-vehicle households, elderly, and persons with a disability. The EJ policy ensures that populations that have traditionally been underserved have safe access to community resources and meaningful choices in transportation. Census data and GIS analysis is used to determine if the project is located in an EJ area. A map of the EJ areas is provided in **Appendix A**.

6 points	Project falls in, or partially in, an EJ area with high concentration of low-income persons, or minorities.
5 points	Project falls in, or partially in, an EJ area with high concentration of zero-vehicle households.
2 point	Project falls in, or partially in, an EJ area with high concentration of seniors or persons with a disability.
Zero points	Project is not located in an EJ area.

Access to Schools (6 points)

This metric is included to account for projects that provide safe routes to schools. Making bicycling and walking to school a safer and more appealing transportation choice encourages a healthy and active lifestyle from an early age.

6 points	Project provides direct access to a school.
3 points	Project is within ½-mile of a school.
Zero points	Project is not within a ½-mile of a school

Access to Community Resources (3 points)

Transportation investments that connect residents to local community resources can have a profound impact on public health. This metric evaluates improved access to community resources. Examples of community resources include: parks, recreational facilities, medical centers, civic buildings, etc.

3 points	Project provides direct access to a community resource.
Zero points	Project does not provide access to a community resource.

Planning (5 points)

This metric is included to identify and add significance to roadway segments or trail corridors that are identified in a locally adopted plan.

5 points	Project is specifically prioritized in a planning document.
2 points	Project is consistent with planning document or Complete Streets policy
Zero points	No planning documentation provided to support project.

Foster a Vibrant Downtown & Central Core (10 total points)

Improving access to and mobility within communities is a goal of *Connected2045*. Projects will be evaluated on how well they are served by pedestrian- and bicycle-supportive densities, land uses, and access to transit. EWG developed a Project Utilization Index (PUI) to evaluate anticipated usage. A map of the PUI is included in **Appendix A**.

10 points	Average PUI 3+
6 points	Average PUI 2-2.9
2 points	Average PUI 1-1.9
4 point	Average PUI <1

Promote Safety (35 total points)

Per the 2010 USDOT Policy Statement on *Bicycle and Pedestrian Accommodation Regulations and Recommendations*, every transportation agency has the responsibility to improve conditions and opportunities for walking and bicycling and to integrate walking and bicycling into their transportation systems. The USDOT encourages transportation agencies to go beyond the minimum requirements, and proactively provide convenient, safe, and context-sensitive facilities that foster increased use by bicyclists and pedestrians of all ages and abilities, and utilize universal design characteristics when appropriate. The four metrics below will be used to evaluate the project's multimodal safety elements.

Pedestrian/Bicycle Crashes (2 points)

This metric relates to *Connected2045's* goal of creating a safe transportation system. Projects that improve locations with pedestrian and/or bicycle crashes will receive points.

- 2 points** The project corridor has locations with pedestrian-involved or bicycle-involved crashes and project addresses the safety issue with an appropriate countermeasure.
- Zero points** There are no pedestrian-involved or bicycle-involved crashes along the project corridor.

Pedestrian/Bicycle Facility Type (24 points)

Active transportation projects can include pedestrian facilities, bicycle facilities, or both. If a sponsor proposes both facility types, the scores of the two metrics will be averaged.

Pedestrian facilities with a high-level of comfort will earn points under this metric.

- 24 points** Project corrects existing sidewalk deficiencies (PSR 0-2 and/or width $\leq 4'$) OR new 5' (min) sidewalks (residential) or 8' (min) sidewalks (commercial) on both sides of road.
- 12 points** New 5' (min) sidewalks (residential) or 8' (min) sidewalks (commercial) on one side of road.
- Zero points** Project does not satisfy the above.

Bicycle facilities with a low-level of stress will earn points under this metric.

- 24 points** Physically protected or buffered bicycle facility OR 10' shared-use path (min).
- 12 points** Conventional bike lanes on roads at 30 mph or less OR 8' shared-use path.
- 6 points** Conventional bike lanes on roads at 35 mph.
- 3 points** Shared-lane markings on roads at 25 mph or less.
- Zero points** Project does not satisfy the above.

Traffic Calming and Design Improvements (6 points)

Traffic calming and design improvements can improve stress levels for bicyclists and comfort levels for pedestrians. Examples of traffic calming and design improvements include: bulb outs, raised crosswalks, lane diets, road diets, refuge islands, lighting, etc. Sponsors can score six points under this metric.

- 3 points** Project has traffic calming solutions to reduce modal conflicts.
- 3 points** Project includes pedestrian-scale lighting.
- Zero points** Project does not satisfy the above.

Intersection Treatments (3 points)

Design for intersections should reduce conflict between pedestrian/bicyclists and vehicles by heightening the level of visibility and indicating a clear right-of-way. Examples of intersection treatments include: pedestrian signals, pedestrian flashing beacons, marked crosswalks, high visibility crosswalk markings, bicycle intersection crossing markings, median refuge islands, etc.

- 3 points** Crossing treatments are provided at intersections or uncontrolled locations OR no intersections in projects limits. **Note:** pedestrian and bicycle projects must have logical termini.

Zero points No crossing treatments where warranted.

Protect Air Quality & Environmental Assets (3 total points)

Transportation projects should limit the impacts on the natural environment. Green infrastructure is a design approach to managing stormwater, the urban heat island effect, public health, and air quality. Sustainable stormwater management treats and slows runoff from impervious roadways, sidewalks, and building surfaces. Examples of green infrastructure include bioswales, rain gardens, pervious strips, pervious pavement, and green bulb-outs. This metric evaluates the integration of green infrastructure into roadway projects.

3 points Project includes green infrastructure elements.

Zero points Project does not include green infrastructure.

Transit Asset Management and System Upgrades

Table 10 outlines the scheme for evaluating transit asset management and system upgrades projects. Transit asset management and system upgrades projects are assessed for eight out of the 10 criteria and include eight metrics. No measures were identified for the criteria related to Job Quality Development and Strengthen Intermodal Connections. Further information on the metrics used to evaluate transit asset management and system upgrades projects follows.

Table 10: Transit Asset Management & System Upgrades Project Type Evaluation Scheme

Connected2045 Investment Priority Criteria	Measure	Metric	Points
<i>Preserve & Maintain the Existing System</i>	Preserving transit assets	Average mileage of replacement vehicles	45
	System upgrades	Project type and impact on the transit system	
<i>Multimodal: Support Public Transportation / Provide More Transportation Choices</i>	Impact to ridership	Number of passenger trips per year affected by the project	20
	First- and last-mile trip impacts	Multimodal options	4
<i>Support Neighborhoods & Communities</i>	Environmental Justice	Project serves or located within EJ community	8
<i>Foster a Vibrant Downtown & Central Core</i>	Multimodal needs of residents and access to employment	Access improvements in central core	3
<i>Promote Safety</i>	Improved safety	Safety and/or security elements at facilities or on transit vehicles	5
<i>Support a Diverse Economy with a Reliable System</i>	Service and customer improvements	ITS elements or other service enhancing technologies	5
<i>Support Quality Job Development</i>	n/a	n/a	n/a
<i>Strengthen Intermodal Connections</i>	n/a	n/a	n/a
<i>Protect Air Quality & Environmental Assets</i>	Impact to the environment	Zero- or low-emission bus replacements or environmental infrastructure elements	10

Preserve & Maintain the Existing System (45 total points)

Maintaining transit assets and upgrading the system can help maintain and attract ridership and improve regional mobility. Transit asset management and system upgrades projects will be evaluated under this criterion depending on the type of project submitted: vehicle replacements or system upgrades. Each project type has a different principal measure and metric.

Vehicle Replacements (45 points)

This metric relates the maintenance of the transit system. Preventative maintenance can extend the lifespan of buses. The average mileage of the vehicles to be replaced is the metric used to evaluate preservation of the system. Vehicles and facilities must meet their useful life by the fiscal year federal funds are programmed.

ADA paratransit bus replacement:

- 45 points** Average mileage of vehicles to be replaced is 250,001+.
- 40 points** Average mileage of vehicles to be replaced is 150,001-250,000.
- 35 points** Average mileage of vehicles to be replaced is >150,000.

Bus replacement (large heavy-duty transit buses 35'-40'):

- 45 points** Average mileage of vehicles to be replaced is 650,001+.
- 40 points** Average mileage of vehicles to be replaced is 550,001-650,000.

35 points Average mileage of vehicles to be replaced is >550,000.

Bus replacement (small heavy-duty transit buses 30’):

45 points Average mileage of vehicles to be replaced is 500,001+.

40 points Average mileage of vehicles to be replaced is 400,001-500,000.

35 points Average mileage of vehicles to be replaced is >400,000.

System Upgrades (45 points)

Upgrading transit facilities or infrastructure can help improve the efficiency of the transit system and improve service for users. This metric relates to the type of facility or infrastructure being upgraded and the impact it has on the transit system.

45 points Upgrades to transit facilities or infrastructure can receive up to 45 points (i.e., transfer centers upgrades, transit maintenance facilities, park and ride lots, bridge tunnels, etc.). Projects that demonstrate a greater need or have a greater impact will receive more points.

35 points Station/bus stop improvements or new signage can receive up to 35 points (i.e., improvements to MetroLink station or a greater number of bus stops). Projects that have a greater impact will receive more points.

Support Public Transportation / Provide More Transportation Choices (24 total points)

Impact to Ridership (20 points)

Ensuring a good state of repair of transit assets and system upgrades has a direct impact on maintaining the existing transit ridership base. Transit ridership is a reflection of vehicle condition, scheduling and operations, and access. This metric relates to the number of passenger trips affected by the project. Projects that will increase the number of passenger trips will receive more points than projects that maintain existing ridership levels. Sponsors must demonstrate that failure to replace or upgrade will negatively impact ridership by documenting inadequate asset availability and the related delays on the route.

20 points Replacement or upgrade will increase ridership on existing routes.

15 points Replacement or upgrade is necessary to maintain existing ridership.

First- and Last-Mile Trip Options (4 points)

A goal of *Connected2045* is to create viable alternatives to private automobile travel. Biking and walking provide critical first- and last-mile connections to transit. Project sponsors will be required to provide information on any bicycle or pedestrian elements that are included as part of the total project and how they improve multimodal access. Examples of multimodal elements includes bike racks on buses or at facilities, bicycle/pedestrian access to facilities, and stop/station design.

4 points Project includes multimodal elements or equipment.

Zero points Project does not include any multimodal elements or equipment.

Support Neighborhoods & Communities (8 total points)

This measure is included to account for projects that serve Environmental Justice (EJ) populations. Project sponsors will be required to provide information on how the project serves EJ populations.

8 points The project serves an EJ population or is located within an EJ area.

Zero points The project does not serve an EJ population or is not located within an EJ area.

Foster a Vibrant Downtown & Central Core (3 total points)

Improving access to and mobility within the central core is a goal of *Connected2045*. Project sponsors will be required to provide information on how the transit project improves access to the central core.

3 points The project improves access to or mobility within the central core.

Zero points The project does not serve the central core.

Promote Safety (5 total points)

This criterion relates to *Connected2045's* goal of creating a safer transportation system. This metric evaluates the impact the project will have on safety and security. Safety and security measures taken at facilities, stations, or stops will have a higher impact than safety measures taken on transit vehicles.

5 points Safety and/or security measures at facility, station, and/or stop (i.e., lighting, cameras, emergency call stations, etc.).

3 points Measures to provide safe services on vehicles (i.e., interior/exterior cameras, audio equipment, object detection or collision warning systems, low floor / kneeling buses, extendable ramps, wheelchair securement, etc.).

Zero points No safety measures.

Support a Diverse Economy with a Reliable Transportation System (5 total points)

Deployment of ITS technologies can improve the service of a transit network. Examples of ITS project elements include automated vehicle location technology, transit signal priority systems, onboard voice and digital announcements of next stop information, and real time bus arrival information. This metric evaluates the integration of ITS technologies.

5 points Project incorporates the use of ITS or other operation/service enhancing technologies.

Zero points Project does not include ITS enhancing technologies.

Protect Air Quality & Environmental Assets (10 total points)

Transportation projects should limit the impacts on the natural environment. The project's air quality benefits OR the integration of green infrastructure will be evaluated.

Replacing diesel buses with zero- or low-emission buses has a positive benefit on air quality. Replacing older diesel buses with newer buses also provides air quality benefits. Incorporating green infrastructure into transit street design also provides positive benefits to the natural environment. Examples of green infrastructure include bioswales, rain gardens, pervious strips, pervious pavement, and green bulb-outs.

10 points Project replaces bus with zero- or low-emission bus (i.e., electric, hybrid, CNG, LNG) OR project incorporates green design/materials at facilities.

4 points Project replaces older diesel bus with a new diesel bus.

Zero points Project does not provide air quality benefits.

Transit Expansion

Table 11 outlines the scheme for evaluating transit expansion projects. Transit expansion projects are assessed for eight out of the 10 criteria and include eight metrics. No measures were identified for the criteria related to Preserve & Maintain the Transportation System and Strengthen Intermodal Connections. Further information on the metrics used to evaluate transit expansion projects follows.

Table 11: Transit Expansion Project Type Evaluation Scheme

Connected2045 Investment Priority Criteria	Measure	Metric	Points
<i>Preserve & Maintain the Existing System</i>	n/a	n/a	n/a
<i>Multimodal: Support Public Transportation / Provide More Transportation Choices</i>	Adding capacity OR geographic expansion	Frequency headway OR population and employment density	60 OR 65
	First- and last-mile trip impacts	Multimodal options	4
<i>Support Neighborhoods & Communities</i>	Environmental Justice	Project serves or located within EJ community	8
<i>Foster a Vibrant Downtown & Central Core</i>	Multimodal needs of residents and access to employment	Access improvements in central core	3
<i>Promote Safety</i>	Improved safety	Safety and/or security elements at facilities or on transit vehicles	5
<i>Support a Diverse Economy with a Reliable System</i>	Service and customer improvements	ITS elements or other service enhancing technologies	5
<i>Support Quality Job Development</i>	Access to jobs (<i>Adding Capacity projects only</i>)	Job density	5
<i>Strengthen Intermodal Connections</i>	n/a	n/a	n/a
<i>Protect Air Quality & Environmental Assets</i>	Impact to the environment	Zero- or low-emission bus replacements or environmental infrastructure elements	10

Support Public Transportation / Provide More Transportation Choices (64 total points)

Transit expansions can help reduce congestion and improve regional mobility by improving reliability and access for more people to more locations. Transit expansion projects will be evaluated under this criterion depending on the type of project submitted: adding capacity or geographic expansion. Each project type has a different principal measure and metric.

Adding Capacity (60 points)

Improving frequency can help to increase annual transit boardings system-wide. It has been documented that a one percent increase in frequency corresponds to a 0.5 percent increase in ridership.

60 points	Project provides 2.5% or higher increase in ridership along route.
50 points	Project provides 2-2.5% increase in ridership along route.
40 points	Project provides 1.5-2% increase in ridership along route.
30 points	Project provides 1-1.5% increase in ridership along route.
20 points	Project provides 0.5-1% increase in ridership along route.
Zero points	Project provides less than 0.5% increase in ridership along route.

Geographic Expansion (65 points)

Implementing transit expansion projects where existing land uses best support the project's success is the key metric under this criterion. EWG developed a population and employment index to evaluate potential ridership. Expansion projects that are located in supportive residential and employment densities will score higher. Points will be assigned based on the average score of a buffer of 0.5 miles of a non-express bus route and a buffer of 1

mile of an express bus stop. *Geographic expansion projects receive five additional points under this criterion to account for the Support Quality Jobs criterion.* A map of the population and employment index is included in **Appendix A.**

65 points	Average population and employment index of 4+
60 points	Average population and employment index of 3-3.9
55 points	Average population and employment index of 2-2.9
35 points	Average population and employment index of 1-1.9
20 points	Average population and employment index <1

First- and Last-Mile Trip Options (4 points)

A goal of *Connected2045* is to create viable alternatives to private automobile travel. Biking and walking provide critical first- and last-mile connections to transit. Project sponsors will be required to provide information on any bicycle or pedestrian elements that are included as part of the total project and how they improve multimodal access. Examples of multimodal elements includes bike racks on buses or at facilities, bicycle/pedestrian access to facilities, and stop/station design.

4 points	Project includes multimodal elements or equipment.
Zero points	Project does not include any multimodal elements or equipment.

Support Neighborhoods & Communities (8 total points)

This measure is included to account for projects that serve Environmental Justice (EJ) populations. Project sponsors will be required to provide information on how the project serves EJ populations.

8 points	The project serves an EJ population or is located within an EJ area.
Zero points	The project does not serve an EJ population or is not located within an EJ area.

Foster a Vibrant Downtown & Central Core (3 total points)

Improving access to and mobility within the central core is a goal of *Connected2045*. Project sponsors will be required to provide information on how the transit project improves access to the central core.

3 points	The project improves access to or mobility within the central core.
Zero points	The project does not serve the central core.

Promote Safety (5 total points)

This criterion relates to *Connected2045's* goal of creating a safer transportation system. This metric evaluates the impact the project will have on safety and security. Safety and security measures taken at facilities, stations, or stops will have a higher impact than safety measures taken on transit vehicles.

5 points	Safety and/or security measures at facility, station, and/or stop (i.e., lighting, cameras, emergency call stations, etc.).
3 points	Measures to provide safe services on vehicles (i.e., interior/exterior cameras, audio equipment, object detection or collision warning systems, low floor / kneeling buses, extendable ramps, wheelchair securement, etc.).
Zero points	No safety measures.

Support a Diverse Economy with a Reliable Transportation System (5 total points)

Deployment of ITS technologies can improve the service of a transit network. Examples of ITS project elements include automated vehicle location technology, transit signal priority systems, onboard voice and digital announcements of next stop information, and real time bus arrival information. This metric evaluates the integration of ITS technologies.

- 5 points** Project incorporates the use of ITS or other operation/service enhancing technologies.
- Zero points** Project does not include ITS enhancing technologies.

Support Quality Job Development – Adding Capacity only (5 total points)

Access to jobs is an important function of the transportation system. The *OnTheMap* tool is derived from census data and will be used to assess where workers are employed in the region. Employment density will be used as a metric in determining how important transit improvements to are in the surrounding area. Geographic expansion projects will not be scored under this criterion since job data is used to determine the population/employment index.

- 5 points** High jobs/sq. mile
- 4 points** Medium-high jobs/sq. mile
- 3 points** Medium jobs/sq. mile
- 2 point** Medium-low jobs/sq. mile
- Zero points** Low jobs/sq. mile

Protect Air Quality & Environmental Assets (10 total points)

Transportation projects should limit the impacts on the natural environment. The project’s air quality benefits OR the integration of green infrastructure will be evaluated. Zero- or low-emission buses have a positive benefit on air quality. Incorporating green infrastructure into transit street design also provides positive benefits to the natural environment. Examples of green infrastructure include bioswales, rain gardens, pervious strips, pervious pavement, and green bulb-outs.

- 10 points** Project includes bus with zero- or low-emission bus (i.e., electric, hybrid, CNG, LNG) OR project incorporates green design/materials at facilities.
- Zero points** Project does not provide air quality benefits.

Freight/Economic Development

Table 12 outlines the scheme for evaluating freight/economic development projects. Freight/economic development projects are assessed for nine out of the 10 criteria and include 12 metrics. No measures were identified for the criteria related to Foster a Vibrant Downtown & Central Core. Further information on the metrics used to evaluate freight/economic development projects follows.

Table 12: Freight/Economic Development Project Type Evaluation Scheme

Connected2045 Investment Priority Criteria	Measure	Metric	Points
<i>Preserve & Maintain the Existing System</i>	Road or bridge condition	PASER rating or bridge sufficiency rating	5
	ITS condition	Preserving ITS components	
<i>Multimodal: Support Public Transportation / Provide More Transportation Choices</i>	Multimodal accommodations	Elements of other modes being implemented as part of the project	10
<i>Support Neighborhoods & Communities</i>	Environmental Justice	Project falls in or partially located in area with a high concentration of: <ol style="list-style-type: none"> low-income persons or minority populations zero-vehicle households seniors or persons with disabilities 	4
<i>Foster a Vibrant Downtown & Central Core</i>	n/a	n/a	n/a
<i>Promote Safety</i>	Improved safety	<ol style="list-style-type: none"> Total crash rate Fatal & serious injury crash rate Safety countermeasure proposed 	10
<i>Support a Diverse Economy with a Reliable System</i>	Travel time reliability	<ol style="list-style-type: none"> Planning Time Index and Travel Time Index or volume/capacity Strategy 	10
<i>Support Quality Job Development</i>	Access to jobs (<i>Economic Development projects only</i>)	Cost per job created	10
<i>Strengthen Intermodal Connections</i>	Regional freight significance (<i>Freight projects only</i>)	<ol style="list-style-type: none"> Project located within an Industrial Site Area <ol style="list-style-type: none"> mega freight center, major freight center, or intermediate freight center Provides connection to intermodal facility Commercial vehicle countermeasure proposed 	60
	Economic development significance (<i>Economic Development projects only</i>)	<ol style="list-style-type: none"> Average income of industry supported Number of jobs created 	50
<i>Protect Air Quality & Environmental Assets</i>	Impact to the environment	Environmental infrastructure elements	1

Preserve & Maintain the Existing System (5 total points)

In order to preserve and maintain the existing transportation system, projects will be assessed in terms of how they contribute to the preservation of existing infrastructure assets. The first metric evaluates the condition of the pavement or bridge. Sponsors can score points under preservation if they are improving the condition of the facility. Roadways or bridges with low pavement/sufficiency ratings will receive a higher preservation score. The second metric relates to the replacement of ITS components. If the sponsor receives points in the first metric and the second metric, the scores of the two metrics will be averaged.

Pavement/Bridge Condition (5 points)

Pavement condition will be assessed using the Pavement Surface Evaluation and Rating (PASER) Guide, which is a visual rating system. PASER ratings range from 1-10, with 1 being 'very poor' condition and 10 being 'excellent' condition.

5 points PASER 2.5 or less

4 points PASER 2.6-3.5

3 points	PASER 3.6-5.5
2 points	PASER 6.6-7.5
1 point	PASER 7.6-8.5
Zero points	PASER 8.6-10

Bridge conditions will be assessed using the bridge sufficiency rating system approved by FHWA. Bridge sufficiency ratings range from 0-100, with 0 being ‘completely deficient’ and 100 being a ‘new’ bridge. State DOTs calculate the ratings based on several factors, including: width, vertical clearance, load capacity, essentiality for public use, and structural safety.

5 points	Bridge sufficiency rating 0-39.9 (very poor)
4 points	Bridge sufficiency rating 40-49.9 (poor)
3 points	Bridge sufficiency rating 50-59.9 (fair)
2 points	Bridge sufficiency rating 60-79.9 (good)
Zero points	Bridge sufficiency rating 80-100 (excellent)

ITS Components (5 points)

Project can earn points if existing ITS components will be preserved, repaired, improved, or upgraded (for example: signals, traffic sensors). To receive points, the ITS components must be within the project limits.

5 points	Existing ITS components are inoperable or require repairs, improvements, or upgrades.
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Multimodal: Support Public Transportation / Provide More Transportation Choices (10 total points)

This measure relates to *Connected2045*'s goal of fostering a multimodal transportation system. Projects can score up to 10 points for the following features existing and being retained, or being included in and newly constructed by the project:

3 points	Project is located on a transit route; OR 1 point if project intersects a transit route
2 points	Includes physical improvements to transit system (benches, ADA landing pads, shelters, etc.)
1 point	New or upgraded sidewalk connections to transit
3 points	Bicycle and/or pedestrian facility directly touching school property; OR 1 point if bicycle and/or pedestrian facility is within ½-mile of school
6 points	Corrects existing sidewalk deficiencies (deficiencies = poor sidewalk conditions or existing width ≤ 4') or new 5' sidewalks (residential) or 8' sidewalks (commercial) on both sides of road
4 points	New or upgraded 5' sidewalks (residential) or 8' sidewalks (commercial) on one side of road
1 point	Reconstruction of curb ramps
8 points	10' shared-use path; OR 6 points for 8' shared-use path
6 points	Physically protected or buffered on-street bicycle facility
4 points	Conventional bike lanes on roads at 30 mph or less; OR 2 points for conventional bike lanes on roads at 35 mph
4 points	5'-8' paved shoulders; OR 1 point for 4' paved shoulders
1 point	Shared-lane markings on roads at 25 mph or less

1 point	Traffic calming solutions to reduce modal conflicts (bulb outs, raised crosswalks, refuge islands, etc.)
1 point	Pedestrian-scale lighting
1 point	Crossing treatments at intersections or uncontrolled locations (pedestrian signals, pedestrian flashing beacons, marked crosswalks, high visibility crosswalks, bicycle intersection crossing markings, etc.)
1 point	Street trees and/or landscaped buffer between roadway and sidewalk

Support Neighborhoods & Communities (4 total points)

This measure is included to account for projects that are located in Environmental Justice (EJ) areas. The purpose of EJ is to focus federal attention on the environmental and human health effects of federal actions on minority or low-income populations with the goal of achieving environmental protection for all communities. EWG further expands on EJ to include areas with a high concentration of one or more of: zero-vehicle households, elderly, and persons with a disability. The EJ policy ensures that populations that have traditionally been underserved have safe access to community resources and meaningful choices in transportation. Census data and GIS analysis is used to determine if the project is located in an EJ area. A map of the EJ areas is provided in **Appendix A**.

4 points	Project falls in, or partially in, an EJ area with high concentration of low-income persons, or minorities.
3 points	Project falls in, or partially in, an EJ area with high concentration of zero-vehicle households.
1 point	Project falls in, or partially in, an EJ area with high concentration of seniors or persons with a disability.
Zero points	Project is not located in an EJ area <u>OR</u> project imposes a burden on EJ area.

Projects that are located within EJ areas will not earn points if they impose a burden on the population of the area. Burdens may include disruption of community cohesion (i.e., access to schools, parks, medical facilities, and religious institutions), adverse employment effects, decline in tax base or property values, displacements, increased noise and/or emissions, diminished aesthetics, and disruption to businesses, or access to transit.

Promote Safety (10 total points)

EWG is focusing on lowering the number of fatalities and serious injuries caused by vehicle crashes. To meet this goal, all projects should strive to correct safety issues in high crash locations or use a systemic approach to address future crashes. The two metrics relate to the current conditions on the roadway by looking at the total crash rate and the fatal and serious injury crash rate. This helps prioritize projects that are in locations experiencing a current problem. The third metric addresses the stated safety problem with an appropriate safety countermeasure.

Project sponsors must use five years of crash data (2011-2015) when calculating the total crash rate and the fatal and serious injury crash rate. Sponsors should use the number of fatal and serious injury crashes and not the total number of people who died or were seriously injured. To receive points under metric one and metric two, the project must include a safety countermeasure that addresses the current safety problem.

Total Crash Rate (5 points)

EWG will group all projects with crashes into quartiles and assign points as follows:

5 points	Top quartile
4 points	Second quartile
3 points	Third quartile

2 points Lowest quartile

Fatal and Serious Injury Crash Rate (5 points)

EWG will group all projects with crashes into quartiles and assign points as follows:

5 points Top quartile

4 points Second quartile

3 points Third quartile

2 point Lowest quartile

Note: If an *intersection* project is in the lowest quartile in both metric one and metric two, and the project includes a safety countermeasure that addresses the safety problem, the project can receive points five total points. Also, if a project has no crashes on the project limits, but includes a preventative safety countermeasure, the project can receive five total points.

Support a Diverse Economy with a Reliable Transportation System (10 total points)

Improving congested roadways benefits the movement of people and goods. Projects will be evaluated based on how well they improve travel conditions. The first metric relates to the existing non-recurring congestion on the project corridor. The second metric relates to the strategy used to mitigate congestion. The scores of the two metrics will be averaged to determine the points under this criterion.

Travel Time Reliability (10 points)

Non-recurring congestion will be assessed using the Planning Time Index (PTI) and the Travel Time Index (TTI), OR the volume to capacity (V/C) ratio. The PTI and TTI are derived from HERE data from the Regional Integrated Transportation Information System (RITIS). The PTI and TTI will only be calculated on roadways for which probe data is available. The points assigned for the PTI and the TTI will be averaged to determine the travel time reliability score. Roads with lower functional classifications will be evaluated based on the V/C ratios established in EWG’s travel demand model.

Probe data is available in RITIS for project length:

<u>Planning Time Index</u>		<u>Travel Time Index</u>	
10 points	PTI 2.5+	10 points	TTI 2+
8 points	PTI 2.1-2.49	8 points	TTI 1.75-1.99
6 points	PTI 1.7-2.09	6 points	TTI 1.5-1.74
4 points	PTI 1.35-1.69	4 points	TTI 1.25-1.49
2 points	PTI 1.1-1.34	2 points	TTI 1-1.24
Zero points	PTI 1.1 or less	Zero points	TTI 1 or less

Probe data is not available in RITIS for project length:

<u>Volume/Capacity Ratio</u>	
10 points	V/C 1.1+
8 points	V/C 0.96-1.0

6 points	V/C 0.85-0.95
4 points	V/C 0.7-0.84
Zero points	V/C 0.69 or less

Strategy (10 points)

A higher PTI and TTI or V/C ratio is indicative of higher levels of congestion. The Strategic Highway Research Program (SHRP 2) has identified strategies that have a direct relationship to travel time reliability. The strategies can be used to mitigate the presence of congestion. The strategies fall into four levels, and each strategy has a proven effect on delay reduction. Projects that incorporate Level 1 or Level 2 strategies will score more points. The strategies are provided in **Appendix B**.

10 points	Level 1 strategy (delay reduction up to 50%) or Level 2 strategy (delay reduction up to 20%).
6 points	Level 3 strategy (delay reduction up to 10%).
4 points	Level 4 strategy (other improvements such as safety and capacity).
Zero points	Level 5 strategy or no strategy.

Support Quality Job Development – Economic Development only (10 total points)

A goal of *Connected2045* is to support the growth of jobs that allow residents to save and return money to the economy. The number of full-time direct jobs will be used to determine a ratio of estimated jobs by project cost. The average income of the development industry type will be multiplied by the number of full-time direct jobs created and then divided by the project cost. Freight projects will not be scored under this criterion since job data is used to determine the freight center ranking.

10 points	8.1+
8 points	6.1-8
6 points	4.1-6
4 points	2.1-4
Zero points	0-2

Strengthen Intermodal Connections – Freight only (60 total points)

The FAST Act repealed both the Primary Freight Network and National Freight Network, and directed FHWA to establish a National Highway Freight Network (NHFN) to strategically direct federal resources and policies toward improved performance of highway portions of the U.S. freight transportation system. This measure addresses connection and improvements to the NHFN as well as local freight planning initiatives. The first metric relates to the project’s location within an industrial site area and the significance of each site. Each industrial site area will fall into one of three tiers: mega, major, or intermediate. The second metric evaluates if the project will connect to an intermodal facility. The third metric addresses the stated freight problem with an appropriate commercial vehicle countermeasure.

Industrial Site Area (30 points)

The methodology used to tier industrial site areas as mega, major, or intermediate is still under development. To receive points under this metric, the project must be located within an industrial site area.

30 points	Mega freight center
------------------	---------------------

- 20 points** Major freight center
- 10 points** Intermediate freight center

Intermodal Connections (30 points)

To receive points, the project must include a commercial vehicle countermeasure that addresses the current freight problem. Common techniques related to commercial vehicle accommodations include improving shoulder width and pavement structure, intersection design, parking, acceleration or deceleration lanes, and truck and car separation.

- 30 points** The project connects to an intermodal freight facility, serves a major freight generator, logistic center, manufacturing and warehouse industrial facility, navigable waterway, or Port District.

Strengthen Intermodal Connections – Economic Development only (50 total points)

Transportation connectivity is a major contributing factor to the performance and competitiveness of industries. This measure is included to account for how well the project supports the development of high quality industries within the region through improved transportation access. The first metric evaluates the relationship between the average income of the industry being supported to the average income of the all industries. The second metric evaluates the number of full-time jobs created.

Average Income of Industry Supported (30 points)

To be an eligible project type, the project must provide a direct transportation linkage to a development site. The development site may include the redevelopment of underutilized properties or industrial sites, business expansion, or planned industrial development. A direct transportation linkage is defined as an eligible publicly-owned and maintained transportation facility from the entrance of the development site to a public road.

- 30 points** The project provides a direct transportation linkage to a business development with an average industry income that is greater than the average income of all industries.
- 25 points** The project provides a direct transportation linkage to a business development with an average industry income that is the same as the average income of all industries.
- 20 points** The project provides a direct transportation linkage to a business development with an average industry income that is $\frac{3}{4}$ of the average income of all industries.
- 15 points** The project provides a direct transportation linkage to a business development with an average industry income that is $\frac{1}{2}$ of the average income of all industries.
- 10 points** The project provides a direct transportation linkage to a business development with an average industry income that is $\frac{1}{4}$ of the average income of all industries.

Number of Full-Time Jobs Created (20 points)

Projects that provide a direct transportation linkage to a greater number of jobs will earn more points under this metric.

- 20 points** The project supports the creation of 250 or more full-time direct jobs.
- 15 points** The project supports the creation of 100-249 full-time direct jobs.
- 10 points** The project supports the creation of 50-99 full-time direct jobs.
- 5 points** The project supports the creation of 20-49 full-time direct jobs.

Zero points The project supports the creation of 19 or less full-time direct jobs.

Protect Air Quality & Environmental Assets (1 total point)

Transportation projects should limit the impacts on the natural environment. Green infrastructure is a design approach to managing stormwater, the urban heat island effect, public health, and air quality. Sustainable stormwater management treats and slows runoff from impervious roadways, sidewalks, and building surfaces. Examples of green infrastructure include bioswales, rain gardens, pervious strips, pervious pavement, and green bulb-outs. This metric evaluates the integration of green infrastructure into roadway projects.

1 point Project includes green infrastructure elements.

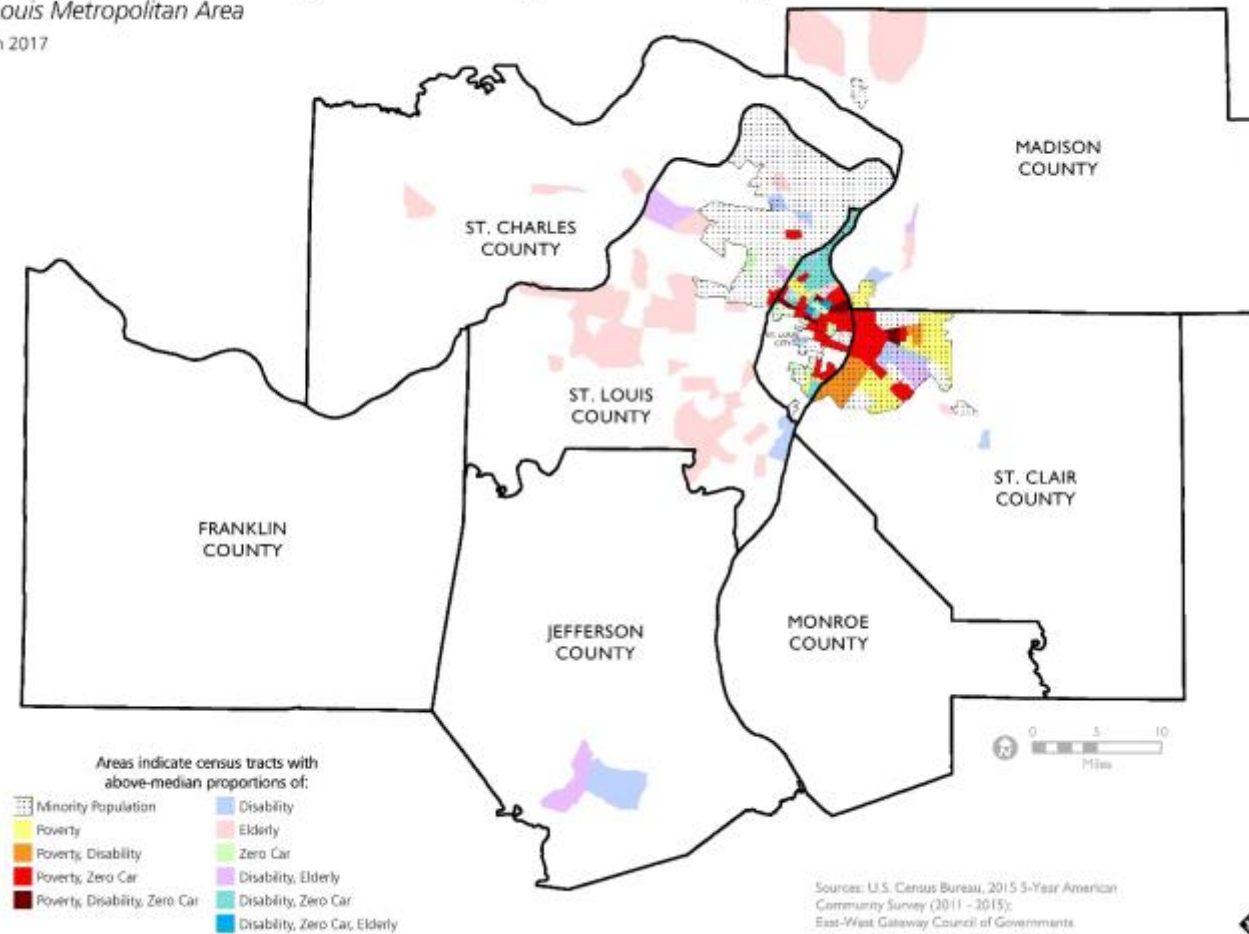
Zero points Project does not include green infrastructure.

Appendix A: Maps

Environmental Justice Population by Census Tract

St. Louis Metropolitan Area

March 2017



Sources: U.S. Census Bureau, 2015 5-Year American Community Survey (2011 - 2015); East-West Gateway Council of Governments

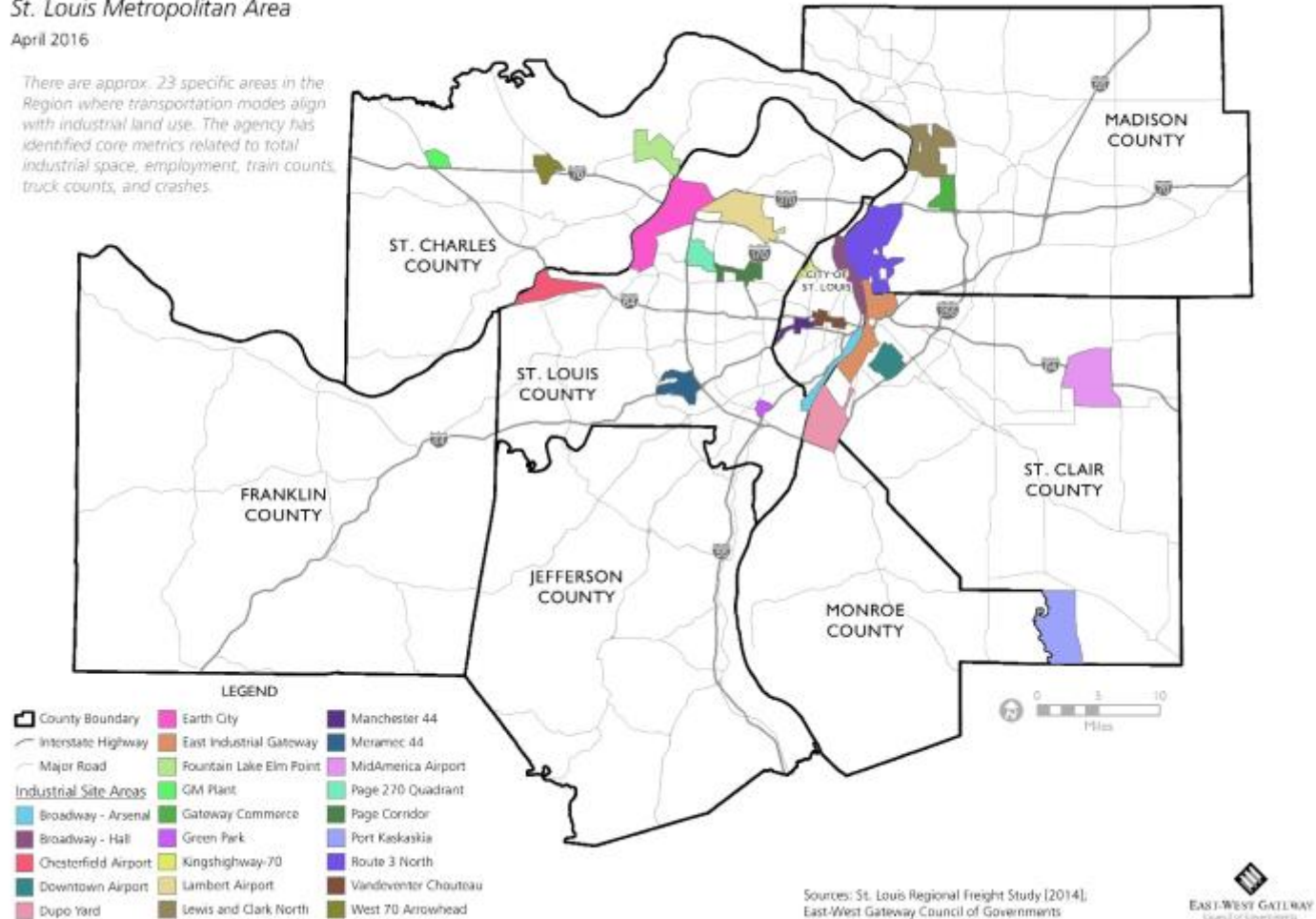


Industrial Site Areas

St. Louis Metropolitan Area

April 2016

There are approx. 23 specific areas in the Region where transportation modes align with industrial land use. The agency has identified core metrics related to total industrial space, employment, train counts, truck counts, and crashes.

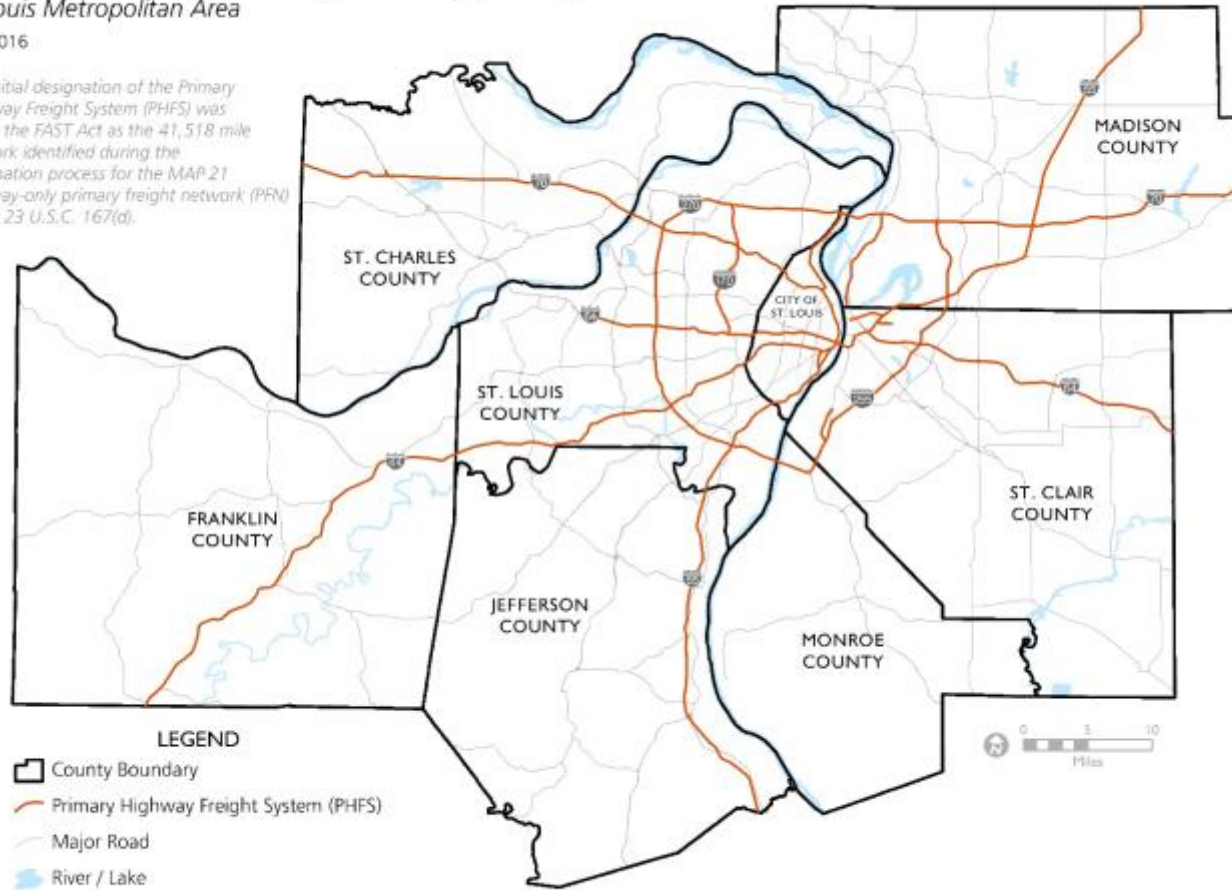


Primary Highway Freight System

St. Louis Metropolitan Area

April 2016

The initial designation of the Primary Highway Freight System (PHFS) was set by the FAST Act as the 41,518 mile network identified during the designation process for the MAP-21 highway-only primary freight network (PFN) under 23 U.S.C. 167(d).



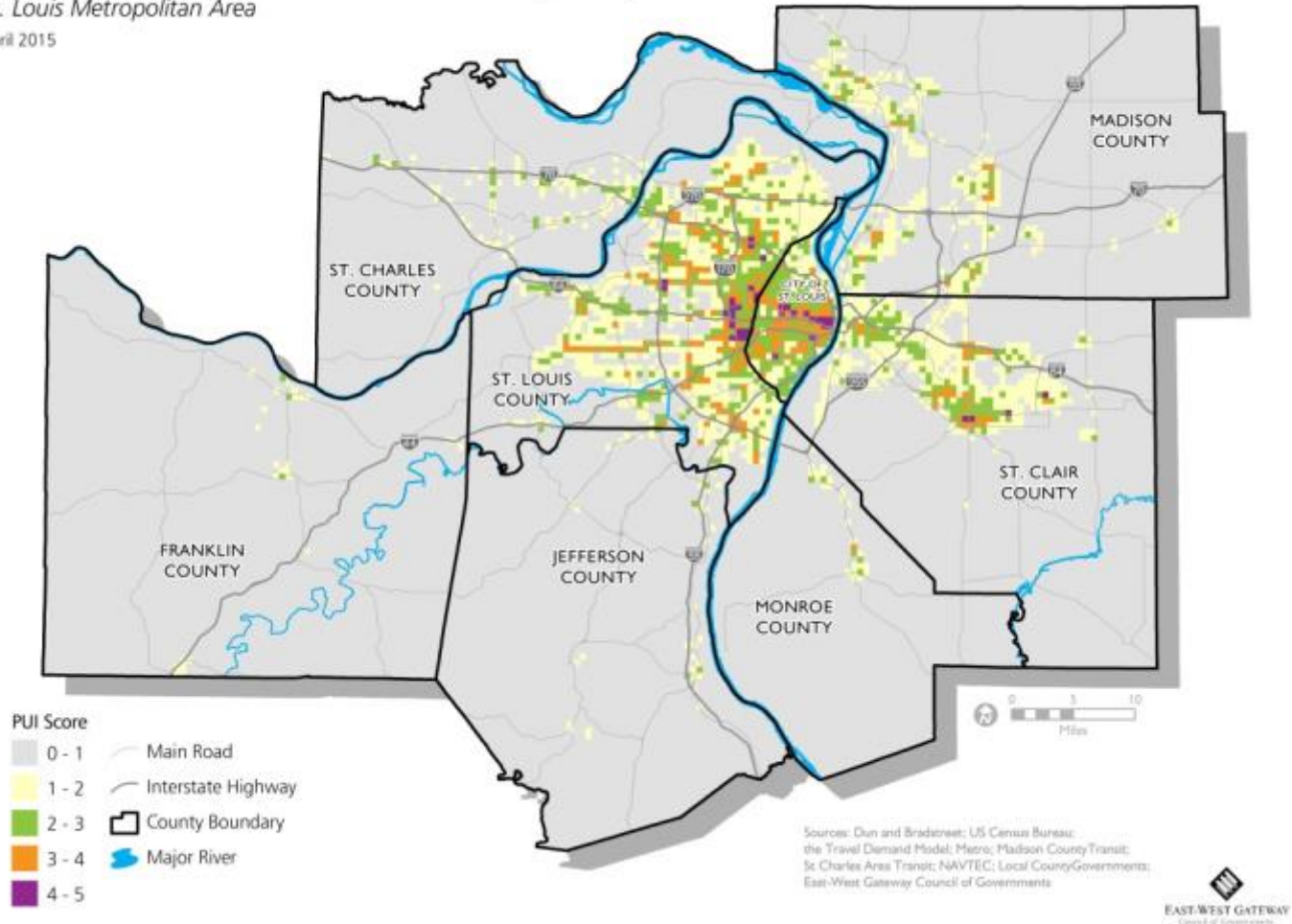
Sources: US Federal Highway Administration;
East-West Gateway Council of Governments

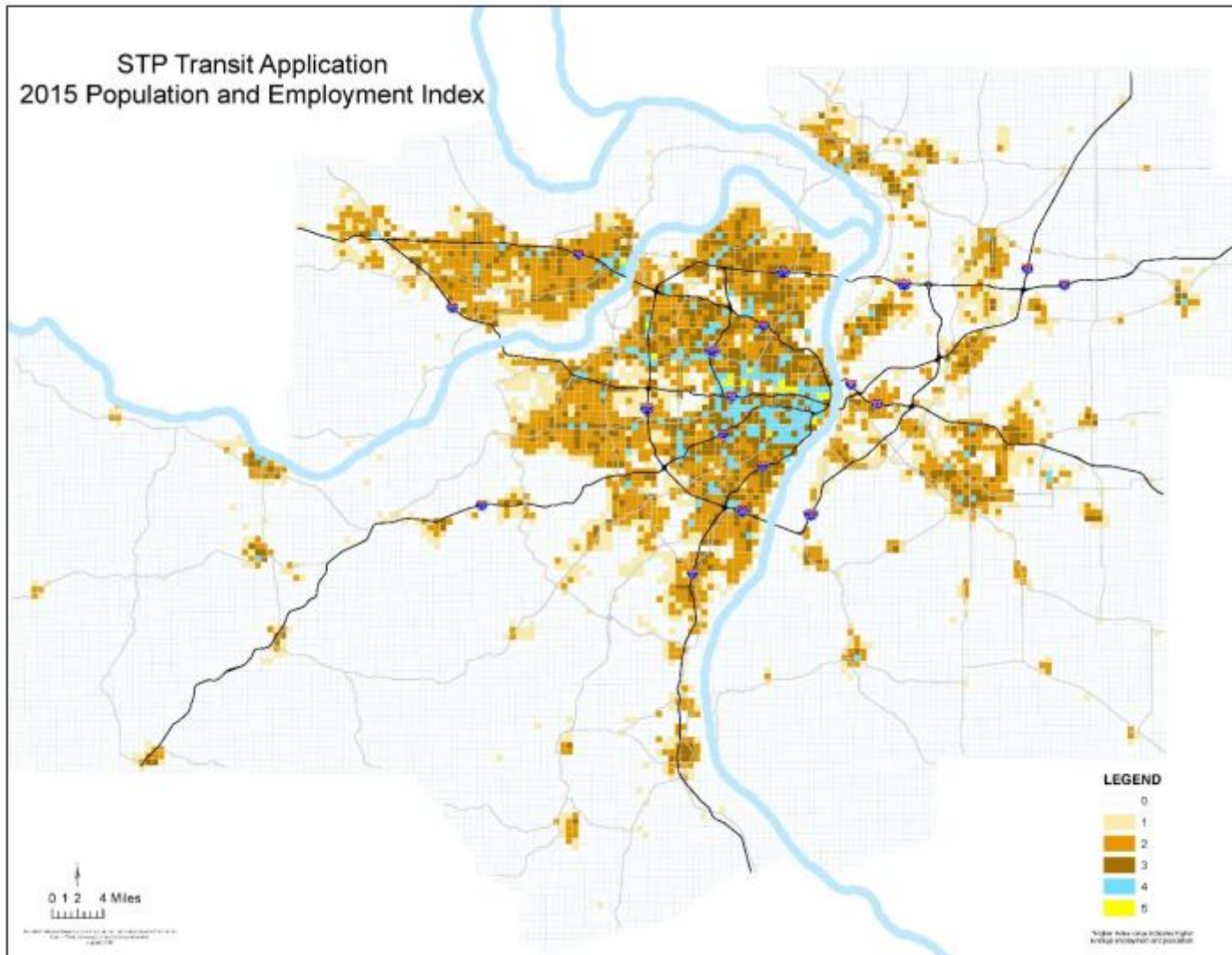


Project Utilization Index (PUI)

St. Louis Metropolitan Area

April 2015





Appendix B: Congestion Strategies

Level 1 Strategies: Delay Reduction of Up to 50%						
Category	Strategy	Treatment	Application to Sources of Congestion	Key Quantitative Benefit	Overall Cost Range ^a	Effectiveness–Cost Rank
Information collection and dissemination	Pre-trip information	National Traffic and Road Closure Information	Weather, work zones	Reduces delays (early and late arrivals) by 50%	Low–medium	1-B
Incident and special event management	Pre-event assistance	Service patrols	Traffic incidents	Can reduce incident response by 19% to 77% and incident clearance time by 8 min	High	1-E
	Post-event assistance	On-scene incident management (incident responder relationship, high-visibility garments, clear buffer zones, incident screens)	Traffic Incidents	Traffic incident management programs have reported reductions in incident duration from 15% to 65%	Low	1-A
		Work zone management	Work zones	Reduces work zone–related delays by 50% to 55%	Variable (depends on addition of infrastructure)	1-D
Infrastructure improvements and demand optimization	Signal timing, ITS	TMC	Traffic-control devices, special events, weather, work zones, traffic incidents	Reduces delay by 10% to 50%	High	1-E
		Traffic adaptive signal control, advanced signal systems	Traffic-control devices	Adaptive signal control systems have been shown to reduce peak period travel times by 6% to 53%	Medium–high	1-C
	Congestion pricing	Electronic toll collection (ETC)	Physical bottlenecks	Electronic toll collection (ETC) reduces delay by 50% for manual-cash customers and by 55% for automatic-coin-machine customers, and increases speed by 57% in the express lanes	High	1-E

Source: Evaluating Alternative Operations Strategies to Improve Travel Time Reliability SHRP2

Level 2 Strategies: Delay Reduction of Up to 20%						
Category	Strategy	Treatment	Application to Sources of Congestion	Key Quantitative Benefit	Overall Cost Range ^a	Effectiveness–Cost Rank
Information collection and dissemination	Surveillance and detection	Remote verification (CCTV)	Traffic-control devices, special events, weather, traffic incidents	5% reduction in travel times in nonrecurring congestion; overall 18% reduction in travel times	Medium	2-C
	Real-time information	Pretrip information by 511, websites, subscription alerts, radio	Traffic-control devices, special events, weather, work zones, traffic incidents	Potential reduction in travel time from 5% to 20%	Variable	2-E
		Road weather information systems	Weather	Reduces delays by up to 12%	Low–medium	2-B
	Roadside messages	Travel time message signs for travelers (DMS, VMS)	All	Improves trip-time reliability, with delay reductions ranging from 1% to 22%	High	2-F
Infrastructure improvements and demand optimization	Geometric design treatments	Bottleneck removal (weaving, alignment)	Physical bottlenecks	Reduces travel time by 5% to 15%.	Medium–high	2-D
	Signal timing, ITS	Signal retiming, optimization	Traffic-control devices	Reduction in travel time and delay of 5% to 20% when traffic-signal retiming was used	Low	2-A
		Advanced transportation automation systems, signal priority, and AVL	Traffic-control devices	Reduces transit delays by 12% to 21%	Low–medium	2-B
	Traffic demand metering	Ramp metering, ramp closure	All	An increase of mainline peak-period flows from 2% to 14% because of on-ramp metering, according to a study of ramp meters in North America	Low–medium	2-B
	Congestion pricing	Cordon pricing (areawide)	Physical bottlenecks, fluctuation in normal traffic, special events	A decrease in inner city traffic by about 20% from congestion pricing in London	Low–medium	2-B
	Lane treatments	Managed lanes: HOV, HOT, and TOT lanes	Physical bottlenecks, fluctuation in normal traffic, traffic incidents	Reduces travel times up to 16%	Medium–high	2-D

Source: Evaluating Alternative Operations Strategies to Improve Travel Time Reliability SHRP2

Draft Criteria for Local Program Applications – Surface Transportation Block Grant Program

East-West Gateway Council of Governments
September 6, 2017



EAST-WEST GATEWAY
Council of Governments

Creating Solutions Across Jurisdictional Boundaries

Why Performance-Based Planning And Programming?

- MAP-21 (and subsequently the FAST Act) required establishment of national goals, performance measures, and accountability in planning and funding transportation investments
- Improved return on investments and resource allocation
- Increased accountability and transparency
- Demonstrates link between funding and performance
- Improved system performance






Performance Management Framework

Federal Goals	MoDOT Goals	IDOT Goals	EWG's 10 Guiding Principles		System Measures
Infrastructure Condition	Taking care of the system	Preserve and Manage the Existing System		Preserve and Maintain the Existing System Ensure the transportation system remains in a state of good repair.	<ul style="list-style-type: none"> • Bridge Condition* • Pavement Condition*
	Connections & Choices	Promote Funding for the Public Component of the System		Support Public Transportation Invest in public transportation to spur economic development, protect the environment and improve quality of life.	<ul style="list-style-type: none"> • Transit Ridership** • Transit Access**
	Connections & Choices			Support Neighborhoods & Communities Connect communities to opportunities and resources across the region.	<ul style="list-style-type: none"> • Housing + Transportation Cost**
	Connections & Choices			Foster a Vibrant Downtown & Central Core Improve access to and mobility within the central core by all modes to increase the attractiveness of St. Louis and strengthen the regional economy.	<ul style="list-style-type: none"> • Population and Employment in the Central Core
	Connections & Choices	Provide a System that Offers a High Degree of Multi-Modal Connectivity, Mobility and Accessibility		Provide More Transportation Choices Create viable alternatives to automobile travel by providing bicycle and pedestrian facilities.	<ul style="list-style-type: none"> • Mode Split** • Vehicle miles traveled per capita**
Safety	Safety	Improve Transportation Safety		Promote Safety and Security Provide a safe and secure transportation system for all users.	<ul style="list-style-type: none"> • Number/Rate of Fatalities* • Number/Rate of Serious Injuries*
Congestion Reduction & System Reliability	Economic Development	Address Congestion and Maximize Efficiency and Effectiveness through Operations		Support a Diverse Economy with a Reliable System Reduce congestion and improve travel time reliability to support the diverse economic sectors of the region.	<ul style="list-style-type: none"> • Annual Hours of Delay* • Planning Time Index*
	Economic Development	Target Investments to Support Business and Employment Growth		Support Quality Job Development Support the growth of wealth producing jobs that allow residents to save and return money to the economy.	<ul style="list-style-type: none"> • Access to Quality Jobs
Freight Movement & Economic Vitality	Economic Development	Provide for Efficient Freight Movement		Strengthen Intermodal Connections Support freight movement and connections that are critical to the efficient flow of both people and goods.	<ul style="list-style-type: none"> • Annual Hours of Truck Delay* • Truck Congestion Cost* • Freight Tonnage
Environmental Sustainability		Ensure a Compatible Interface of the System with Environmental, Social, Energy and Land Use Considerations		Protect Air Quality and Environmental Assets Encourage investments that recognize the linkages between the social, economic, and natural fabric of the region.	<ul style="list-style-type: none"> • Criteria Pollutant Emissions* • Conservation & Environmental Significance Score

Background - EWG Performance Measures



- Preserve and Maintain
 - Percent of bridges in the region rated functionally obsolete and structurally deficient
 - Percent of pavement rated “not acceptable”
- Public Transit
 - Transit Ridership – annual transit boardings regionwide
 - Residential Transit Access – percent of households within ¼ mile of a transit stop
- Neighborhoods and Communities
 - Housing and Transportation Costs – average proportion of household income spent on housing and transportation in the St. Louis region
- Vibrant Central Core
 - Employment in the central core
 - Population in the central core
- Transportation Choices
 - Mode Split – total percentage of workers commuting via walking, biking, transit, or rideshare
 - Vehicle miles traveled per capita per day

Performance Measures			
Performance Measures	Definition	Desired Trend	Baseline
Bridges	Percent of Bridges in the Region Rated Structurally Deficient		2014 21.1%
Pavement	Percent of pavement rated “not acceptable”		2013 13.0%

Performance Measures			
Performance Measures	Definition	Desired Trend	Baseline
H+T Costs	Average Proportion of household income spent on housing and transportation costs in the St. Louis region		2005-2009 54.8%

Background - EWG Performance Measures

- Safety and Security
 - Fatalities/Fatality Rate
 - Disabling Injuries/Injury Rate
 - Number of non-motorized fatalities and serious injuries
- Congestion
 - Annual Hours of Delay
 - Planning Time Index
- Quality Jobs
 - Under development
- Freight and Economic Development
 - Tonnage
 - Truck congestion cost
 - Annual hours of truck delay
- Air Quality and the Environment
 - Emissions reductions
 - Impact on conservation opportunity areas/areas of ecological significance

Performance Measures				
Performance Measures	Definition	Desired Trend	Baseline	
Number of Fatalities	Five year moving average of the count of the number of fatalities on all public roads for a calendar year		2009-2013	277
Number of Disabling Injuries	Five year moving average of the count of the number of disabling injuries on all public roads for a calendar year		2009-2013	2,436

Application Structure

- Up to 100 performance points
 - Primary purpose
 - *Connected2045* Guiding Principles
- Up to additional 10 points
 - Usage: 4 points
 - Cost: 6 points
- Cost vs. Person Miles of Travel
- Competition across application types
- No silos/set-asides

TPC Comments – August 2017

- Comments received from two TPC members
 - PASER scale
 - Cost-benefit
 - Project cost
 - Concern with large urban projects
 - Concern with rural mill and overlay projects
 - Streetscapes

Modifications to Draft Scoring Criteria

- PASER range adjusted in road project application

Average PASER rating:	Proposed Criteria (Aug 2017):	Proposed Modification:
1.6-4.5	60	60
4.6-5.5	55	57
5.6-7.5	45	53
1.5 or less	35	40
7.6-8.5	25	30
8.6-10	0	0

- Bridge sufficiency rating points adjusted for changes in road scores

Bridge sufficiency rating:	Proposed Criteria (Aug 2017):	Proposed Modification:
0-39.9	60	60
40-49.9	50	55
50-59.9	40	45
60-79.9	30	30
80-100	0	0

Modifications to Draft Scoring Criteria

- Support Public Transportation and Provide More Transportation Choices criteria combined to create multimodal category

Points	Improvement Type
3 points	Project is located on a transit route; <u>OR</u> 1 point if project intersects a transit route
2 points	Includes physical improvements to transit system (benches, ADA landing pads, shelters, etc.)
1 point	New or upgraded sidewalk connections to transit
3 points	Bicycle and/or pedestrian facility directly touching school property; <u>OR</u> 1 point if bicycle and/or pedestrian facility is within ½-mile of school
6 points	Corrects existing sidewalk deficiencies (deficiencies = poor sidewalk conditions or existing width ≤ 4') or new 5' sidewalks (residential) or 8' sidewalks (commercial) on both sides of road
4 points	New or upgraded 5' sidewalks (residential) or 8' sidewalks (commercial) on one side of road
1 point	Reconstruction of curb ramps
8 points	10' shared-use path; <u>OR</u> 6 points for 8' shared-use path
6 points	Physically protected or buffered on-street bicycle facility
4 points	Conventional bike lanes on roads at 30 mph or less; <u>OR</u> 2 points for conventional bike lanes on roads at 35 mph
4 points	5'-8' paved shoulders; <u>OR</u> 1 point for 4' paved shoulders
1 point	Shared-lane markings on roads at 25 mph or less
1 point	Traffic calming solutions to reduce modal conflicts (bulb outs, raised crosswalks, refuge islands, etc.)
1 point	Pedestrian-scale lighting
1 point	Crossing treatments at intersections or uncontrolled locations (pedestrian signals, pedestrian flashing beacons, marked crosswalks, high visibility crosswalks, bicycle intersection crossing markings, etc.)
1 point	Street trees and/or landscaped buffer between roadway and sidewalk

Modifications to Draft Scoring Criteria

- Support Public Transportation reduced from eight to five points – three points added to Support Neighborhoods and Communities (active transportation only)
- Each project can receive no more than 20% of the available federal funds during each funding round

Usage and Cost

- Usage and Cost Point Breakdown – Missouri

Usage – PMT	Usage Point Allocation		Federal Project Cost	Cost Point Allocation
10,001+	4.0		\$0-\$400,000	6.0
5,001-10,000	3.2		\$400,001-\$650,000	4.8
2,001-5,000	2.4		\$650,001-\$1,000,000	3.6
701-2,000	1.6		\$1,000,001-\$1,300,000	2.4
0-700	0.8		\$1,300,001+	1.2

- Usage and Cost Point Breakdown – Illinois

Usage – PMT	Usage Point Allocation		Construction Cost	Cost Point Allocation
4,001+	4.0		\$0-\$450,000	6.0
2,001-4,000	3.2		\$450,001-\$550,000	4.8
1,101-2,000	2.4		\$550,001-\$650,000	3.6
501-1,100	1.6		\$650,001-\$750,000	2.4
0-500	0.8		\$750,001+	1.2

Next Steps - Timeline

- September 15, 2017 – TPC comments due on draft evaluation criteria
- October 4, 2017 – seek TPC approval of draft evaluation criteria
- October 2017 – seek EAC and Board approval of draft evaluation
- November/December 2017 – Workshops
- December 2017 – Call for applications
- March 2018 – Applications due
- May 2018 – Funding recommendations

Questions? Comments?

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Thank You!

Missouri and Illinois

Joint Transportation Planning Committee Meeting Notes

September 2017

The Missouri and Illinois Joint Transportation Planning Committee (TPC) Meeting was held in the Council offices on Wednesday, September 6, 2017 at 2:00 p.m.

Missouri Members in Attendance

Chris Ehlen, Jefferson County

John Hicks, St Louis County

Jessica Mefford-Miller, BSDA/Metro

Mike Henderson, MoDOT

Ron Williams, Franklin County

Rich Bradley, City of St Louis

Amanda Brauer, St Charles County

Pat Kelly, Municipal League of Metro St Louis

Grace Kyung, Trailnet

Illinois Members in Attendance

Lora Rensing, IDOT

Norm Etling, St Clair County

William Grogan, St Clair County Transit District

Mark Gvillo, Madison County

Richard Sauget, Jr, Village of Sauget

Members Absent

Greg Smith, St Louis Regional Chamber

Maurice Falls, City of St Louis

Wesley Stephen, MoDOT

James Fields, St Clair County

Tom Smith, City of Waterloo

Craig Tajkowski, St Charles County

Chris Poehler, BSDA/Metro

Jerry J. Kane, Madison County Transit

Aaron Metzger, Monroe County

John Miller, City of Collinsville

Others in Attendance:

Curtis Jones, IDOT

Kevin Jemison, IDOT

Chris Smith, City of Columbia

Dan Sommer, IDOT

Jackie Covington, BSDA/Metro

Shawn Tooley, MoDOT

Adam Gerstner, City of O'Fallon, IL

John Kohler, City of St Louis

Jon Schaller, IDOT

Tony Erwin, TWM

Randall Glaser, MoDOT

Betsy Tracy, FHWA Illinois

Alex Devlin, Trailnet

EWGCOG Staff:

Paul Hubbman, Jason Lange, Jerry Blair, Josh Schwenk

CALL TO ORDER

The meeting was called to order by Ron Williams, Chair.

ITEMS

Great Streets Initiative – Paul Hubbman presented on EWG’s Great Streets Initiative in Illinois. \$70,000 for consulting fees for use with transportation, land use, environmental, and market consultants contracted to provide strategic planning services. Applications will be available on EWG’s website (ewgateway.org) beginning in mid-September. A half-day workshop to assist sponsors with their applications will be held at IDOT at the end of September. Applications are due mid-October, with Board action on project selection anticipated for January 2018. Project completion is expected by June 2018.

Draft scoring criteria for Surface Transportation Block Grant Program project applications – Jason Lange discussed the draft criteria for EWG’s STP-S program. The change in criteria is proposed to bring project selection in line with federal performance-based planning

requirements as well as the regional long-range transportation plan, *Connected2045*. EWG is proposing seven applications based on project type: road, bridge, traffic flow, safety, active transportation, freight & economic development, and transit. Each project type is scored on a 100-point scale, and each has a primary purpose category contributing the most points towards its score. Ten additional points are available in a cost/usage category.

Based on comments provided by TPC members, changes have been made to incentivize good pavement maintenance practices, to combine the support public transportation and provide more transportation categories so that project where no transit exists would not be penalized, to provide a catalogue of multimodal features so context-appropriate elements can secure points for each improvement made, to reduce the public transit points awarded for active transportation projects and add those points to support neighborhoods and communities, and to add a cap of 20% of total funds per project.

Q: Jessica Mefford-Miller – Was the 20% max present in the old criteria or is that a change?

A: Jason Lange – That is a change. There has not been a max before.

Q: Is that 20% max per state basis?

A: Lange – Per project per the amount available in each state.

Q: Mefford-Miller – Is there a max on the other categories we can compare this to?

A: Lange – If we have \$40 million available this year, the maximum available would be \$8 million. That would be for each project regardless of the category.

Next steps: Comments can be submitted until September 22nd. Staff will collect comments and bring them back along with any adjustments made at the October 4th TPC meeting for the TPC's approval. Staff anticipates submitting the draft criteria to the EAC and Board of Directors for approval at their October meetings. Following Board approval, small workshops will be held throughout the region to assist sponsors in learning the new criteria. The goal is to have project applications open in December 2017 and TPC project recommendations in May 2018.

Q: John Hicks – When is the next long-range plan update?

A: Lange – The next plan will go for approval in 2019.

Q: Hicks – It seems like the plan is driving a lot of this. So, when the plan adjusts, do you just go back and adjust the criteria?

A: Lange – Yes, we would adjust the criteria. This draft is adjusting the criteria to be in line with our ten guiding principles which have been around for a few years.

Q: Hicks – What if the new criteria doesn't have the desired intent or there's a big glitch? Are we talking a few years' cycle to make adjustments or adjusting within a one year period?

A: Lange – The current STP criteria is adjusted every so often. If we find something isn't working, we would certainly make adjustments as we do with our current applications.

Q: Grace Kyung – Are you building in better racial equity indicators in how you're holding your project applicants accountable? Are you looking at how transportation decisions or funding of road/bridge projects impact disadvantaged or more vulnerable communities outside of the environmental justice zones?

A: Lange – What we're using in this project application is the environmental justice zones. This is based on the federal requirements as well as East-West Gateway's measures which look at zero-car households, persons with disabilities, and seniors which are areas in addition to federal regulations.

Q: Kyung – We were wondering about projects outside the environmental justice zones. How are you ensuring that the applicants are also thinking about the impact they're having in communities? What is their community engagement plan? How do they prioritize tradeoff issues between traffic flow and connecting neighborhoods? What areas do people want to be connected, and by what mode of transportation?

A: Randall Glaser – The current federal regulations require public involvement for projects that make changes to existing roadways, so if you're doing more than a resurfacing project, the federal regulations spell out the public involvement process you must follow.

A: Lange – We look at environmental justice, but project sponsors, regardless of where the project will be, need to be reaching out to their community, letting them know what projects are coming out. We do have open houses for our Transportation Improvement Program when projects are selected. We also have a separate public comment period just on the project

applications before the selection. It is also the responsibility of the project applicant to send that information out to their municipality and city council.

Q: John Kohler – Historically, the City of St Louis has had some very large-scale projects such as bridges and viaducts. If we can only request 20%, I don't know how the City will be able to afford to replace some of these very large structures that have to be completed in one phase. Is there a way we can comment on the cap?

A: Lange – Yes, you can comment until the 22nd.

Q: Mefford-Miller – What is the genesis of the cap? What was the specific comment that led to the 20%?

A: Lange – There was a concern that high-cost projects in urban areas could potentially take most of the federal funds because cost isn't as big of a factor in the criteria.

Q: The old criteria was very heavily weighted toward the cost-effectiveness factor compared to this new process. Without some type of cap, one project could almost take all of the funds if it scored very well.

A: Lange – In Illinois, there's been concern that due to the one-project per county rule, a county could take all the money they wanted. Over the years, we haven't seen that happen, but since the criteria's being adjusted we wanted to address that. We wanted to open it up for comments to see if this is too much, too little, or whatever your opinion may be.

Q: Ron Williams – How did you come up with 20%? Why 20%?

A: Lange – Looking at past projects, we took into account some of the larger projects and started at 20%.

Q: How does that work with the policy that each county is guaranteed one project?

A: Lange – That's not going to change.

Q: Kyung – For traffic flow, for support a diverse economy with a reliable transportation system, I'm wondering how you're going to balance that with studies that show slowing traffic down through business districts and supporting multimodal options improves local businesses and helps economic growth? How are you going to award points to ensure people aren't just driving through neighborhoods quickly without noticing local businesses? At the same time, if you make traffic flow better do you also increase the amount of car traffic and contradict the

improvements to air quality? How are you weaving all those different layers together in this section?

A: Lange – The traffic flow section is looking at increasing speeds and decreasing delay in peak-hour. We're looking at making incremental improvements to roadways that would improve the traffic flow through that area during peak hour times.

A: Jerry Blair – One of the other issues there is that one of the federal performance measures is reliability. And that's what we were trying to get at with traffic flow. If you're focused on reliability, you're not focused as much on expansion to draw more cars in. A lot of this will be technology. Even in a downtown area, reliability is important.

Q: Mike Henderson – I noticed that in one criteria you used the reliability factor "change in normal commute" but the traffic flow major element was speed increase. I was a little uncomfortable with speed increase; level of service is what I'm used to seeing.

A: Blair – The measures out there for reliability, are not very reliable themselves. Speed is a more reliable measure. We used speed to get to reliability. Data availability for lower-level roadways will hopefully improve over time, but is not currently very reliable.

Q: Betsy Tracy – Federal performance measures are a requirement but how you implement it is up to you. The guidelines don't get down to this level of specificity. There is local involvement and I don't want you to think that this level of detail is required by the federal regulations.

A: Blair – I don't think this is dramatically different to how we've operated in the past. We're applying more specificity to some of these measures, but the general concepts remain the same. The big change is cost effectiveness. I would say what we are doing is consistent with what most major MPOs in the country are doing to meet the national guidelines.

Q: Kohler – I foresee us coming to EWG for guidance on which application type best fits our project which will be tough on you.

A: Blair – I don't think that decision will be that hard because you have these value-added categories in each application type. So it will really be very clear. You can specify what type of project this is and where it fits.

Q: Kohler – What projects would be safety?

A: Blair – If we haven't defined the project types clearly, let us know and we will create some language prior to the applications.

Q: Lora Rensing – We're concerned about how roadway projects will compare against some of the other project types. There's only one roadway category but many types and sizes of roads. I'm concerned that some of the projects that have been historically considered valuable projects may not be able to compete against some of these other project types. There are a range of communities in the region and some of the smaller ones may have difficulty meeting the criteria within the roadway category.

Q: Amanda Brauer – I have the same concern in St Charles County. St Charles City has roads that would score pretty well. They have multimodal and active transportation. But Wentzville, the fastest growing community in the region, probably wouldn't score very well. They don't have any transit, no connectivity for a shared use path. I think we're going to have a lot of trouble competing against projects in the core and any transit project which is virtually guaranteed at least 80 points and probably the whole 100.

A: Blair – If you look at the weights, you're going to see that road, bridge, and safety are going to dominate the scoring. Those categories have the highest points in the primary purpose. We recognize that it will be critical to take care of our system, it will be critical to address safety problems. One of the reasons we split it out is to get different project types because we don't get many safety projects.

Q: Rensing – My concern is within the roadway category. We will have multiple different communities with different roadway projects competing within that category. Communities that don't have those areas for extra points are not going to be able to compete against communities that do have those extra features.

A: Blair – There is a federal requirement that we look at bicycle and pedestrian accommodation on any roadway we're going to use federal funds. If we give points for it, people will look at it.

Q: Rensing – There's a difference between looking at and providing for these accommodations. Some of our communities, because of their locations and lack of generators, have looked at it and decided it doesn't make sense. We don't want to spend money where it doesn't make sense. There should be some balance there.

A: Blair – That was one of the reasons we modified the public transportation criteria under road and bridge. Perhaps it requires more modification.

Q: Christopher Ehlen – Compared to the last proposal, I think this is a step in the right direction with less weighting for transit. Is that correct?

A: Lange – Now that they're combined, the sponsor can gain those points in other areas.

Other Business –

TAP Comments - Jason Lange mentioned that the TAP projects' comment period has closed and they will go for Board approval this month. There were 28 projects which received comments and all comments were in support of the projects.

Annual Meeting – Jason Lange announced the Annual Meeting will be on November 17th, 2017 at the Hilton St Louis at the Ballpark.

Outstanding Local Government Achievement Awards – Jason Lange announced that nominations for the awards are open through September 22nd, 2017.

MoDOT Long-Range Plan – MoDOT has hired a consultant to update their long-range plan. Public involvement will kick-off this month with an online survey going live Monday, September 10th, 2017 and is available on MoDOT's website.

TIGER Grants – Betsy Tracy announced that applications for TIGER grants are due October 16th, 2017. Applications are available at www.transportation.gov/tiger.

The next meeting is scheduled for Wednesday, October 4, at 2:00 pm.

Meeting Adjourned.