Tech Memo 2 – Analysis of Pedestrian/Bicycle Project Evaluation and Prioritization Practices in Peer Regions

I. Introduction

This Technical Memorandum presents information on how pedestrian and bicycle improvements are evaluated, selected and prioritized by metropolitan planning organizations for regions considered to be peers of the Atlanta region. Findings from this analysis, and outcomes from subsequent discussions among ARC staff, stakeholders, and the consultant team, will be used to inform recommendations presented in forthcoming Technical Memorandums. Information is organized by "peer region" and for each peer region information is generally organized to first give a broad and brief overview of the regional transportation plan and the relationship between the plan and the agencies' transportation improvement programs (TIP), and then provide details (where available) on how bicycle and pedestrian projects are evaluated, selected, and prioritized for inclusion in the TIP.

II. Peer Regions

Mecklenburg-Union MPO (Charlotte)[1]

The Mecklenburg-Union MPO's (MUMPO) region has a population of 1.12 million and covers an area of 929.4 square miles encompassing 22 jurisdictions within Mecklenburg and Union counties, including the City of Charlotte. It has non-attainment status for regional air quality. The MUMPO is responsible for developing the Long Range Transportation Plan (LRTP), the latest (Plan 2035) of which was approved in 2010.

Although the approved project list in the LRTP is limited to road projects, MUMPO supports the development of a multi-modal transportation network, and requires that appropriate eligible projects include bicycle and/or pedestrian accommodations. MUMPO did not include a 2035 project list of bicycle or pedestrian projects due to the uneven and unpredictable revenue streams available and dedicated to such projects. The *bicycle, pedestrian and greenway chapters* in the 2035 LRTP describe the planning and construction efforts and

[1] Based on information accessed on MUMPO website http://www.mumpo.org/2035-long-range-transportation-plan and conversation with Nick Landa, Senior Principal Planner

accomplishments within the MUMPO area.

Bicycle and Pedestrian Project Evaluation/Selection

Bicycle and Pedestrian projects within the region are funded in one of three ways. STP Direct Attributable Funds is the MPO's only discretionary funding program. These funds have the most flexibility and are most commonly used for smaller projects within smaller jurisdictions that typically don't have a lot of funding for projects on non-NCDOT owned roadways. Enhancement Project Funds are distributed through NCDOT. The MPO ranks all projects by mode and submits top ranked projects to NCDOT, which then ranks all projects statewide using its Prioritization 2.0 process (see further below). Lastly, standalone bicycle and pedestrian projects may be funded through CMAQ, which is a separate process with criteria focused on emission reductions.

The MPO assigned a Bike/Pedestrian subcommittee in May 2010 with the task of developing ranking criteria (summarized below) to recommend projects to the MUMPO for funding, including submittal of top ranked projects to NCDOT and through the STP Direct Attributable Funds, based on a comprehensive and technically-oriented project ranking process. The overarching goal for the ranking methodology is to encourage conducting a thorough assessment of projects without placing an undue burden upon the applicant. When a quantitative measure of the absolute effectiveness of the project was not possible or reasonable, criteria based on a yes/no answer was created.

Project ranking criteria were established within three categories: Connectivity and Access, Feasibility and Cost of Implementation, and Safety. In addition to providing project scores for each category, an applicant must also provide a project application, a transportation purpose statement, exhibits that describe the proposed facility, destinations, and surrounding land uses.

The Connectivity and Access category is weighted most heavily, allowing for 45 points. Points are awarded based on described strengths in design, location and function of facility based on the attributes below. Criteria for this category include:

- Distance to destination – project must be directly adjacent to noted destination, or connect to greater bicycle or pedestrian system. The closer the proposed facility is to the noted destination, the more points it receives (e.g. 0.0-0.25 miles = 10 points, >5 miles = 0 points)
- Directness of facility – If proposed project is most direct feasible route from origin to destination it receives 5 points, if not, 0 points.
- Quality and perceived interest in getting to existing destination – a total of 20 points is possible for this section. This total is accumulated by adding each item of interest that is a destination for the project (see table below).

The following table outlines possible uses and the points associated with each:

High Interest (5 points)	**Moderate Interest** (3 points)	**Low Interest** (1 point)
Town Center (proportional to town size)	Multi-Family Residential Development	Low-Density/Single Family Residential Development
Mixed Use Development Center	Park-n-Ride Lot	Privately Accessible Property
Major Employment Center	Light Rail Stop	Bus Stop
Transit Station	Park	
School	Greenway	
	Bus Stop (higher trips and activity)*	

*Higher trips and activity is defined as 50+ trips and 25+ boardings/alightings (see application for more information).

Uses not specifically listed in the table, but considered relevant, will be evaluated by the committee tasked with reviewing projects, and may be allocated points if deemed appropriate.

- Regional nature of facility and destinations - Has the proposed project been identified through a previous planning effort or policy? Yes = 5 points, No = 0 points
- Shown path - A shown path illustrates a known need. This can be an actual shown path on the side of the road, a high volume of observed cyclists along a roadway, etc. Yes = 5 points, No = 0 points.

Feasibility and Cost of Implementation is the second most heavily weighted category, allowing for 30 possible points. Points are awarded based on described cost/benefit balance and progress made to date on the part of applicant based on the attributes below:

- Right-of-way or easement acquired or dedicated – projects that have greater than three quarters acquired/dedicated receive 15 points, 20% or less receive 0 points.
- Preliminary construction plans in hands – level of design work that has been done: completed = 5 points, partial = 3 points, none = 0 points.
- Limited environmental impacts – to what extent does the proposed project impact the environment: CE Type I and II = 5 points, EA = 2 points, EIS = 0 points

Safety is the least heavily weighted category, allowing for 25 possible points. Project must demonstrate a safer condition for bicyclists and/or pedestrians traveling between origins and destinations in the same general corridor or planning area. Qualities of a project improving bicycle/pedestrian safety including the following attributes:

- Existing conditions - Conditions must demonstrate a safety hazard to cyclists and/or pedestrians as currently designed. Examples of demonstrated safety hazards may include recorded crash data or a posted speed limit over 30 miles per hour. Yes = 10 points, No = 0 points
- Vehicular speed - Proposed project design encourages a reduction in vehicular speeds (i.e. - traffic calming devices, narrowed travel lanes, or lower speed limits). Yes = 5 points, No = 0 points

- Reduced exposure - Proposed project reduces the exposure between the motor vehicles, bicyclists and/or pedestrians. Examples of a physical barrier may include an off-road greenway, pedestrian refuge island, or a bike boulevard separated by a vertical structure. Examples of a defined space include striped bike lanes, sidewalks adjacent to the curb, crosswalks, and signed bike routes. The applicant should recognize any new safety risks introduced by the project design, such as placing a multi-modal side-path separate from the roadway but crossing multiple driveways or conflict points. Physical barrier = 10 points, Defined space = 5 points, No reduction = 0 points

Other Information Worth Noting

North Carolina Department of Transportation (NCDOT) has developed what it calls Prioritization 2.0 (P2.0), which it has presented to and received feedback from all MPOs and RPOs. The P2.0 methodology incorporates quantitative data, local input ranking, and multimodal points. Local input may be based on local prioritization methodologies. Multimodal scoring includes as one of its three components multimodal design features, which include pedestrian and bicycle facilities. Bicycle and pedestrian improvements are prioritized as separate elements in P2.0 using the following criteria, which align closely with MUMPO's ranking criteria:

- Right-of-way acquired
- Connectivity
- Inclusion in adopted plan
- Bicycle or pedestrian crashes
- Demand/density
- MPO/RPO ranking

NCDOT is in the process of developing the third iteration of its prioritization framework, which will be even more quantitative in nature.

Chicago Metropolitan Agency for Planning[2]

The Chicago Metropolitan Agency for Planning (CMAP) region includes 284 municipalities, 7 counties, and more than 8 million people. CMAP developed and now guides the implementation of GO TO 2040, metropolitan Chicago's first comprehensive regional plan. The GO TO 2040 Plan acknowledges the need to prioritize investments. According to the plan, "To improve the efficiency and effectiveness of our transportation system, the first requirement is to spend existing resources more wisely. Investment decisions should be based on performance-driven criteria, rather than arbitrary

[2] Based on information access on CMAP website http://www.cmap.illinois.gov/bike-ped/resources and conversation with John O'Neal, Associate Planner and Bicycle and Pedestrian Program Manager.

formulas. The region should prioritize efforts to modernize our significant existing assets we have, rather than continuing to expand the system. Investments of all types should take a multimodal approach, with consideration for transit users, bicyclists, and pedestrians. The federal government and State of Illinois should keep pace with global competition by increasing transportation investment in metropolitan regions like ours, which drive the U.S. and state economy."

Bicycle and Pedestrian Project Evaluation/Selection

The guiding policy for the region is outlined in the GO TO 2040 plan. This plan establishes a vision and action items with policy statements throughout that support multi-modal and non-motorized transportation, livability, etc. The current TIP includes a category for pedestrian and bicycle projects. These projects are listed in a database format (e.g. identifying location, describing the project, etc.), but there is not an attempt to prioritize them.

Being a non-attainment area CMAP has a CMAQ program. There is a Pedestrian and Bicycle Task Force that provides recommendations to the CMAQ Project Selection Committee regarding pedestrian and bicycle projects. The Task Force has a process and methodology for evaluating and prioritizing projects. Criteria used in this analysis include:

- Existing and projected population
- Existing and projected employment
- Bike and pedestrian crashes
- Transit ridership
- Land use
- Planned facilities
- Connectivity
- Project readiness
- U.S. Census Journey to Work (by mode) data
- Relationship to the Regional Greenway and Trails Plan.

Using these criteria the Task Force is able to compare and rank potential CMAQ projects. They provide their recommendation to the CMAQ Committee, who then combines it with their own methodology, which focuses on congestion mitigation and an air quality cost and benefit analysis. They recently implemented a requirement that project sponsors have initiated Phase 1 engineering in order to be considered.

For the CMAQ projects, there are currently no targets for pedestrian and bicycle funding. The goal for these projects is that they have a regional impact. As such, the Project Selection Committee has initiated a policy that pedestrian projects that are in proximity to high ridership transit stations will be prioritized. There is a general acknowledgement that the evaluation of "high" ridership needs to account for the range of density and ridership throughout the region.

Health specific measures are not currently incorporated into project selection processes, in part because of a lack of good data.

Other Information Worth Noting

CMAP is in the process of developing a Transportation Alternatives (TA) program. They have made the policy level decision that only pedestrian and bicycle projects will be funded through this program. The TA program will include evaluation measures and performance based planning elements. Criteria to track these performance measures have not yet been identified.

Also of note, there is a Complete Streets state law in Illinois. It was the first such law passed in the U.S. The law resulted in an amendment to the IDOT Design Manual to make multimodal accommodations routine. This law requires a 20% local match. If the local municipality does not want to provide this match, they can take the complete streets elements out of a project; however, when they do this they are supposed to go through a series of public notification processes.

North Central Texas Council of Governments (Dallas-Fort Worth)[3]

The North Central Texas Council of Governments (NCTCOG) is the regional planning commission serving a 16-county region of North Central Texas, which is centered on the urban centers of Dallas and Fort Worth. NCTCOG has over 230 member governments including 16 counties, numerous cities, school districts, and special districts, and encompasses an area of almost 13,000 square miles and a population of approximately 6.7 million.

Regional Transportation Planning

Active transportation (i.e. bicycle and pedestrian) is an integral component of Mobility 2035, the Regional Long Range Transportation Plan. NCTCOG makes recommendations regarding surface transportation, congestion mitigation, air quality and federal transit projects. The Texas Department of Transportation (TxDOT) and NCTCOG work together to develop major transportation projects with federal and state funds. Residents' input is essential when seeking to improve the transportation system and is sought throughout the decision-making process

NCTCOG staff works cooperatively with the Surface Transportation Technical Committee (STTC), Regional Transportation Council (RTC), and regional partners to select projects that support regional priorities. Projects are evaluated based on their individual merits and their impact on the regional transportation system. Then, the set of recommended projects is evaluated to ensure an equitable distribution of selected projects throughout the region.[4]

NCTCOG funds bicycle/pedestrian projects using STP, CMAQ and regional toll revenue. These funding sources and others are also used to fund projects through the Sustainable Development program. Information pertaining to all bicycle and pedestrian project funding opportunities is provided on the

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[3] Information derived from Sustainable Development Funding Program webpage http://www.nctcog.org/trans/sustdev/landuse/funding/ and conversation with Karla Weaver, Program Manager at NCTCOG.

[4] Exhibit II-11: Regional Toll Revenue (RTR) Sustainable Development Call for Projects. 2013-2016 Transportation Improvement Program. Accessed from http://www.nctcog.org/trans/tip/13_16TIP/documents/_Chapter3.pdf on June 7, 2013.

Sustainable Development webpage, including non-NCTCOG funding opportunities such as the Category 8 HSIP call for projects from TxDOT.

Bicycle and Pedestrian Project Evaluation/Selection

Funding was awarded for bicycle and pedestrian projects in 2012 based on seven scoring criteria:

- Impact on the Regional Veloweb Plan (a regional system of off-street trails and sidewalks) - is the project intrinsically related to the Veloweb? Does it increase connectivity to within the trail system? (25%)
- Impact to Barrier Crossings - does the project increase connectivity between locations? Does the project help address barriers? (20 %)
- Safety - does the project promote safety among users? (15 %)
- Mobility Function/Impact to Users – is the project increasing connectivity to existing transit? (10%)
- Environment – does project help to curve emissions? (10 %)
- Economic Development - does it help promote the creation of sustainable jobs? (10%)
- Cost vs. Benefit - do the benefits of the project outweigh the costs? (10%)

The selection process also has the following components:

- Documentation of Match – a Council resolution that commits local funds to providing a project match is required from local jurisdictions. A minimum 20% is required for most projects and that is typically what the jurisdictions provide.
- Close out report – all jurisdictions receiving transportation funding through the NCTOG are required to submit a close-out report that includes before/after photographs, schedule details, development impacts (if funded through the Sustainable Development program-see discussion of performance measures in Section III). Awarded applicants do not receive notice to proceed until the initial fields are filled in on the close-out reporting form. This same form is then required to be submitted post-implementation with additional information pertaining to the performance measures.

Denver Region Council of Governments[5]

The Denver Regional Council of Governments (DRCOG) is comprised of nearly 60 cities, towns and local elected officials representing 48 municipalities and nine counties in the Denver metropolitan region. The region is home to 2.7 million people. Under federal law, it serves as the Metropolitan Planning Organization (MPO) coordinating transportation planning with air quality goals. Under state statutes, DRCOG is a regional planning commission, responsible for preparing a regional plan for the

[5] Based on information accessed on DRCOG website http://www.drcog.org/index.cfm?page=Transportation and conversation with Todd Cottrell, Senior Transportation Planner

development of the metro area.

Regional Transportation Plan

The *Metro Vision 2035 Plan* serves as a comprehensive guide for future development of the region with respect to growth and development, transportation, and the environment. One component of the *Metro Vision 2035 Plan* is the *2035 Metro Vision Regional Transportation Plan* (MVRTP). It presents the vision for a multimodal transportation system that is needed to respond to future growth, as well as to influence how the growth occurs. It specifies strategies, policies, and major capital improvements that advance the objectives of the MVRTP. The fiscally constrained MVRTP defines the specific transportation elements and services that can be provided to year 2035 based on reasonably expected revenues.

The MVRTP contains policies and actions strategies for pedestrian and bicycle travel, including the following that inform prioritization:

- Emphasize projects on existing and future facilities that will reduce the likelihood or severity of crashes involving motor vehicles, trains, bicycles, and pedestrians;
- Prioritize transportation system improvements locally and regionally that support bicycle and pedestrian modes as viable alternative travel choices.
- Improve transportation linkages to major destinations and attractions outside the region
- Provide safe and convenient access for pedestrians and bicyclists to park-n-Ride lots, rapid transit stations, and bus stops. Also provide bicycle parking and promote the capability of transit vehicles to carry bicycles.

The MVRTP also contains a *Pedestrian and Bicycle Element*, which includes additional design and planning policies that more directly address bicycle and pedestrian facility planning and design needs. These will be explored in further detail in Technical Memorandum 4.

DRCOG has a coordinated call for projects for its TIP every four years rather than having separate calls for projects for each funding source. The agency has maintained flexibility in how it applies different funding sources to any given project submitted for the TIP and this has worked well.

Bicycle and Pedestrian Project Evaluation/Selection

The MVRTP does not outline a process or criteria for evaluating/prioritizing bicycle and pedestrian projects. However, as part of its 2012-2017 Transportation Improvement Program, which specifically identifies and programs projects for federal funding to implement the MVRTP, eligibility and evaluation criteria are outlined for roadway capacity and operational improvement projects, transit projects, as well as new and upgrade bicycle/pedestrian projects.

Eligibility criteria for new bicycle/pedestrian projects include:

1. New construction projects are defined as projects that will result in a new facility where pedestrian and/or bicycle infrastructure does not currently exist. Infrastructure is defined as having asphalt, concrete, or similar hard-pavement type.

2. Pedestrian and bicycle projects must be on facilities contained in an adopted local or regional plan.
3. Any new pavement must be designed and constructed to withstand occasional vehicle travel (emergency vehicles).
4. If project consists of multiple, non-contiguous elements, all elements must either be a) on the same facility (primary corridor) OR b) within ¼ mile of the largest element of the project.
5. Projects that consist of both a new construction element and an upgrade and/or reconstruction element must be categorized as either one or the other to score the project. That categorization is determined by the element proposed in the largest contiguous segment of the project, based on linear feet.
6. All projects intended for multiple user types (bike and pedestrian) are required to be constructed to a minimum width of 8 feet for the entire length of the project.
7. New construction projects must accomplish connectivity. Examples of connectivity include, but are not limited to:
    - Closing a gap between two existing bicycle facility sections
    - Providing access to transit (stations, park-n-Rides, stops)
    - Providing pedestrian and bicycle connections to schools, parks, shopping, and/or employment
    - Eliminating barriers
    - Linking a bicycle facility to a 2035 Metro Vision RTP roadway that serves bicyclists

For upgrade/reconstruction bicycle/pedestrian projects the eligibility criteria 2, 3, 4, 5, 6 above apply in addition to the following:

1. Upgrade construction projects are defined as projects that are an upgrade or operational enhancement to an existing facility that does NOT currently meet ADA/AASHTO design standards.
2. Reconstruction projects are defined as projects that reconstruct the total pavement of a facility due to pavement deterioration. For a project to be proposed as a pavement reconstruction project, the Pavement Condition Index, computed according to the methods in Appendix H, must have a PCI score 25 or less for asphalt surfaces and/or 35 or less for concrete surfaces AND the original pavement must be more than 20 years old.
3. Any project proposing a new grade separation must be submitted as a new bicycle/pedestrian project.

Evaluation Criteria for new and upgrade bicycle/pedestrian projects are listed below. More detail is provided in Table 10 of the 2012-2017 TIP policy document.

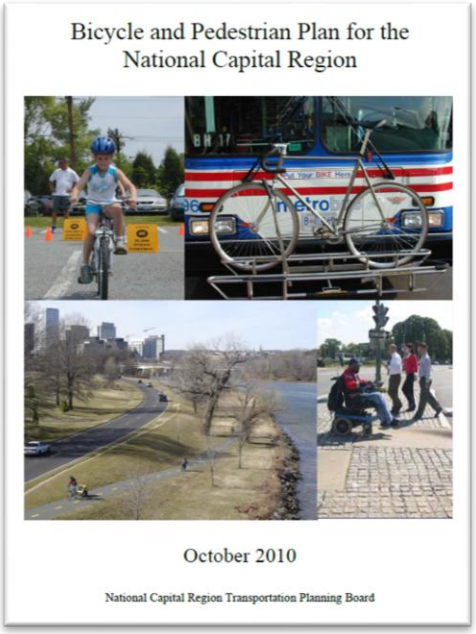
- RTP priority corridors (5 points)
- Safety (relevant crash history, conflict factor, facility lighting)(14 points)
- Connectivity (19 points)
- Multiple enhancements (bi-directional, multi-modal) (4 points)

- Air quality benefits (8 points)
- User base (i.e. demand) (8 points) Counts conducted at specified times and duration are required for upgrade/reconstruction projects, DRCOG staff have considered conducting field checks of counts in response to numbers that seem off, but haven't followed up on this.
- Cost-effectiveness (8 points)
- Environmental justice (3 points)
- Overmatch (above 20% local match) (9 points) Sponsors must submit a certification form that states they will follow federal rules and have committed local match funds. The form must be signed by an authorized representative (e.g. Mayor, City Manager)
- Project-related Metro Vision implementation and strategic corridor focus (project location related to urban centers, rapid transit, strategic corridors, urban growth boundary, Denver airport) (18 points)
- Sponsor-related Metro Vision Implementation (adopted Metro Vision policies, implement alternative mode plans, signed Mile High Compact, PM_{10} conformity) (8 points)

And for upgrade/reconstruction projects the number of existing users is factored in addition to the above criteria.

Metropolitan Washington Council of Governments (Washington, DC)[6]

The Metropolitan Washington Council of Governments (MWCOG) serves as a regional planning agency for Washington, DC and parts of Northern Virginia and central Maryland. MWCOG also staffs the Transportation Planning Board (TPB) which is the metropolitan planning organization for the region. The MWCOG/TPB region has a population of 4.9 million and includes 22 jurisdictions in two states and the District of Columbia. In addition to including representatives of local governments and state transportation agencies; the TPB also includes representation from the Maryland and Virginia General Assemblies; the Washington Metropolitan Area Transit Authority; and non-voting members from the Metropolitan Washington Airports Authority and federal agencies. The TPB is responsible for developing a Financially Constrained Long-Range Transportation Plan (CLRP), and a Transportation Improvement Program (TIP), which lists projects and programs that will be funded in the next six years.



The TPB developed the Region Forward 2050 plan in 2008 which establishes a transportation vision for the National Capital region. Region Forward 2050 calls for more rapid

[6] Based on information accessed on the CRLP website http://www.mwcog.org/clrp/ and conversations with Sarah Crawford, Transportation Planner, Department of Transportation Planning, MWCOG.

implementation of bicycle and pedestrian projects, increased walking and bicycling, and reduced pedestrian and bicyclist fatalities, as well as setting targets and indicators which will measure progress towards regional goals.

The TPB also adopted the Bicycle and Pedestrian Plan for the National Capital Region in 2010 which is a compilation of bicycle and pedestrian projects from jurisdictions around the region. The Bicycle and Pedestrian Plan builds on Region Forward 2050, and provides specific details on bicycle and pedestrian projects, studies, and initiatives.

The TPB adopted a Complete Streets Policy in the spring of 2012. The purpose of the policy is to:

> *Encourage TPB member jurisdictions and agencies that do not already have a Complete Streets policy in place, or who are revising an existing policy, to adopt a Complete Streets policy that includes common elements that the TPB believes represent current best practices.*

The TPB's regional policies and federal metropolitan planning requirements exert an influence on the types of projects that are developed and submitted by the states. However, project development typically occurs at the state and local levels.

The District of Columbia, Maryland and Virginia each controls their own funding streams and each has its own system for moving projects forward. Within each state, projects may be pursued for a variety of reasons and may have multiple sponsors.

MWCOG administers the regional Transportation and Land Use Connections (TLC) Program. The Program provides grant funding for relatively small planning projects that emphasize infrastructure and policy improvements to better integrate transportation and the built environment. In the fall of 2012, the program funded a design project for a rail trail project in Frederick, MD. The TLC program is funded by federal “PL” funds.

Bicycle and Pedestrian Project Evaluation/Selection

In the spring of 2013, MWCOG updated the process for selecting projects for Transportation Alternatives funding. Because the TPB includes three states, a regional application was developed, as well as a state-specific application. A regional application and a state-specific application is required to be submitted for each project. This section will focus on the regional application process.

Four regional funding programs were identified:

- Accessibility for all users
    - Broaden regional mobility choices
    - Create safer transportation facilities
- Accessibility to Transit and Employment
    - Proximity to Regional Activity Centers and Metrorail
- Safe Routes to School

- Project Coordination
    - Origination in local planning efforts
    - Public Involvement

The intent of the regional TA Program it to focus limited resources on construction projects. Design funding is available only for projects that are already funded for construction under this program or by the jurisdiction.

Projects must have 30 percent design plans completed (and included with the application) to be eligible. This is to demonstrate that projects are able to move forward, that potential problems have been identified, and that appropriate cost estimates can be determined.

Regional TA Program funding may not be used for planning (however states may allow TA funds to be used for planning)

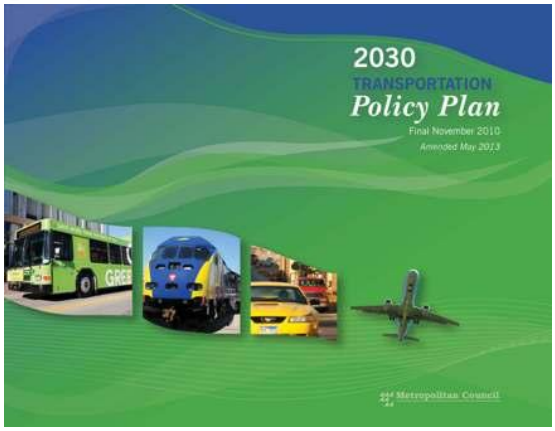
Applicants are strongly encouraged to submit proposals for a minimum of $100,000. The minimum match requirement is 20%. Preference is given to projects that do not provide in-kind match, and/or exceed the 20% match requirement.

Applications will be reviewed by a panel of national and local experts consisting of representatives from the public and private sectors. The panel will recommend a slate of projects to the TPB, which will have final approval of the projects. In making its selection, the TPB will seek to ensure that funds are awarded to a broad cross-section of jurisdictions within each state-level jurisdiction.

Regional selection criteria will reflect the goals and policies of the TPB. The selection criteria will be used to evaluate whether projects achieve the following:

- increase transportation options for pedestrians, bicyclists and other non-drivers;
- enhance walkability and accessibility within regional activity centers;
- promote accessibility for people with disabilities and for disadvantaged communities;
- enhance safe bicycle and pedestrian access to schools; and
- provide public involvement opportunities and demonstrate collaboration within and between jurisdictions.

Metropolitan Council – Twin Cities (Minneapolis/St. Paul)[7]



The Metropolitan Council is the metropolitan planning organization for the Twin Cities metro area. It is charged under state law with establishing regional growth policies, and long-range plans for transportation, aviation, water resources and regional parks. Its jurisdiction is the seven-county Twin Cities metro area.

Overview of TIP and Relationship to Regional Transportation Planning

The Metropolitan Council's Transportation Improvement Program (TIP) is a staged, four- year, multimodal program of highway, transit, bicycle, pedestrian and transportation enhancement projects and programs proposed for federal funding throughout the seven-county metropolitan area. The TIP is updated each year by the Transportation Advisory Board and the Metropolitan Council. The TIP is prepared by the Metropolitan Council with assistance from the Minnesota Department of Transportation. It represents a fiscally-constrained four-year program of project delivery. The projects contained in the TIP must be consistent with and implement the region's transportation plan and priorities as well as the State Implementation Plan for air quality.

The region's 2030 Transportation Policy Plan (TPP), adopted in November 2010, contains policies and plans to guide development of the transportation system in the Twin Cities metro area to the year 2030. The plan addresses problems and issues in preserving the region's mobility and describes actions which will be undertaken to preserve, improve, and expand the region's highways, transit, and other transportation modes. The following are quotes from the TPP related to policies and funding criteria related to bicycles and pedestrians.

Policies and Strategies (pg. 172)

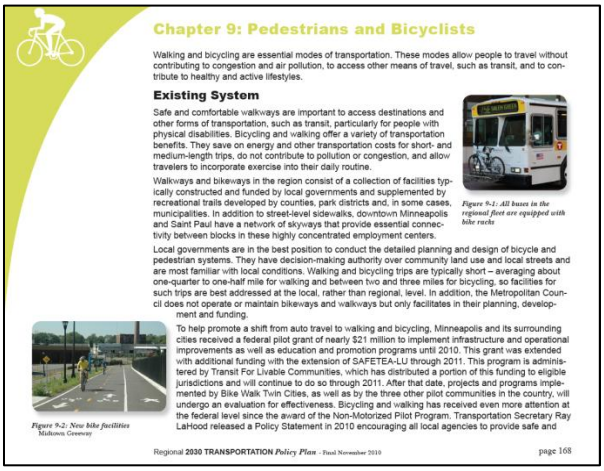
- Strategy 18a. Bicycle and Pedestrian Regional Investment Priorities: The Council will **prioritize federal funding for bicycle and pedestrian improvements based on their ability to accomplish regional transportation objectives for bicycling or walking in a cost-effective manner and improving access to major destinations**.

- Strategy 18c. Local Planning for Bicycling and Walking: The Metropolitan Council encourages local planning for bicycle and pedestrian mobility by requiring that **a local bicycle or pedestrian project must be consistent with an adopted plan to be considered eligible for federal transportation funding.**

[7] Based on information accessed on Metropolitan Council website http://www.metrocouncil.org/Transportation/Planning.aspx and conversations with Connie Kozlak, Transportation Planner

Investment Priorities and Requirements (pgs. 174-175)

- **Consistency with Policies and Plans**. As a condition of receiving federal funds, both freestanding bicycle and pedestrian projects must be included in or be consistent with:
    - A comprehensive plan or, in the case of pedestrian projects, a comprehensive plan or a transition plan developed under the federal Americans with Disabilities Act, or
    - An adopted capital improvement program consistent with a comprehensive plan.



Chapter 9: Pedestrians and Bicyclists

Walking and bicycling are essential modes of transportation. These modes allow people to travel without contributing to congestion and air pollution, to access other means of travel, such as transit, and to contribute to healthy and active lifestyles.

Existing System

Safe and comfortable walkways are important to access destinations and other forms of transportation, such as transit, particularly for people with physical disabilities. Bicycling and walking offer a variety of transportation benefits. They save on energy and other transportation costs for short- and medium-length trips, do not contribute to pollution or congestion, and allow travelers to incorporate exercise into their daily routine.

Figure 9-1: All buses in the regional fleet are equipped with bike racks

Walkways and bikeways in the region consist of a collection of facilities typically constructed and funded by local governments and supplemented by recreational trails developed by counties, park districts and, in some cases, municipalities. In addition to street-level sidewalks, downtown Minneapolis and Saint Paul have a network of skyways that provide essential connectivity between blocks in these highly concentrated employment centers.

Local governments are in the best position to conduct the detailed planning and design of bicycle and pedestrian systems. They have decision-making authority over community land use and local streets and are most familiar with local conditions. Walking and bicycling trips are typically short – averaging about one-quarter to one-half mile for walking and between two and three miles for bicycling, so facilities for such trips are best addressed at the local, rather than regional, level. In addition, the Metropolitan Council does not operate or maintain bikeways and walkways but only facilitates in their planning, development and funding.

Figure 9-2: New bike facilities
Midtown Greenway

To help promote a shift from auto travel to walking and bicycling, Minneapolis and its surrounding cities received a federal pilot grant of nearly $21 million to implement infrastructure and operational improvements as well as education and promotion programs until 2010. This grant was extended with additional funding with the extension of SAFETEA-LU through 2011. This program is administered by Transit For Livable Communities, which has distributed a portion of this funding to eligible jurisdictions and will continue to do so through 2011. After that date, projects and programs implemented by Bike Walk Twin Cities, as well as by the three other pilot communities in the country, will undergo an evaluation for effectiveness. Bicycling and walking has received even more attention at the federal level since the award of the Non-Motorized Pilot Program. Transportation Secretary Ray LaHood released a Policy Statement in 2010 encouraging all local agencies to provide safe and

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- **Cooperative Projects**. Evaluation criteria will favor bicycle and pedestrian projects that were developed under the cooperation of more than one jurisdiction. These jurisdictions could be a state, county, city, park or transit agency.

- **Cost Effectiveness**. Bicycle and pedestrian projects should be cost-effective to construct and to maintain. When determining the right solution for a safety or connectivity problem, local agencies should **first consider methods that use existing right-of-way and infrastructure to improve the desirability of bicycling or walking before considering the construction of entirely new facilities.**

- **Safety**. Evaluation criteria will favor infrastructure and operations projects that significantly improve safety for bicyclists and pedestrians while maintaining or enhancing the ease of bicycling or walking. Funding can also be provided to projects that do not improve network connectivity but significantly improve the safety of bicycling or walking or that address an identified safety problem. An example of this type of project would be improvements to intersections that receive a high amount of bicycle travel but which were not originally designed with bicyclist safety in mind.

- **Multimodal Projects**. Roadway projects submitted for federal funding should include features that benefit all users of the transportation system including pedestrians and bicyclists. The evaluation criteria for roadway and transit categories favor those projects that address more than one travel mode. Evaluation criteria will favor highway projects that accommodate pedestrians and bicyclists with an emphasis on safety and barrier removal. In addition, evaluation criteria for stand-alone bicycle and pedestrian projects will favor those that support compact mixed-use transit-oriented development and within employment centers and to projects that provide a direct connection to a high-service transit facility.

- **Reconstruction of Existing Facilities**. In addition to building new facilities for bicyclists and pedestrians, local jurisdictions are encouraged to apply for regional funding for reconstruction of

existing facilities so long as the proposal **enhances the bikeway or pedestrian path to a quality level superior to that of the original facility**.

- **Transportation Purpose**. Federal transportation funds will be used on bicycle projects **that serve primarily a transportation function** in addition to recreation. Bikeway facilities should be located where potential use is highest and where they can most significantly enhance transportation choices.

- **Bicycle Connections**. Evaluation criteria will favor projects that are able to most significantly improve connectivity by overcoming a major barrier or filling in a large gap in the network.

- **Signage and Maintenance**. Bicycle projects funded with regionally selected federal transportation funds should include signage to help users navigate the system and identify bicycle routes once the project is completed. The Council may provide guidance on sign content and placement following the development of a regional signage plan. Projects considered for federal funding should also have an approved plan for maintenance or a maintenance agreement to ensure that the facility remains in good repair and is passable.

- **Opportunities for Pedestrian Improvements**. Funding priority will be geared toward stand-alone pedestrian projects that are connected to transit service. These include:

    - Along high-frequency service bus routes in the urban core and first-ring suburbs.

    - Transit-oriented developments around existing or programmed fixed-guideway transit stations.

    - Existing transit stations, high-service park-and-ride locations that are within a reasonable walking distance to residential development or activity centers, and high transit destinations like the downtowns and the University of Minnesota.

    - Projects that are included as part of a community's ADA transition plan and/or demonstrations of best practices in design for the use of persons with different physical abilities.

- **Education and Promotion Programs**. In addition to operations and infrastructure, the Transportation Advisory Board will continue to make programs designed to promote and to increase the safety and ease of bicycling, and to educate bicyclists on the proper and safe use of roadways eligible for receiving federal transportation funds.

Bicycle and Pedestrian Project Evaluation/Selection

Every two years the Metropolitan Council's Transportation Advisory Board (TAB) solicits applications for federal transportation funds and evaluates the proposed projects based on criteria that reflect federal and regional transportation priorities and mobility goals. The regional solicitation process includes projects from several federal funding programs: the Surface Transportation Program (STP), Transportation Alternatives (TA), and Congestion Mitigation Air Quality (CMAQ). The TAB selects

projects to receive funding. Projects are evaluated by assigning one or two criteria to each member of the TAB, and that person reviews every project based only on those criteria. They have found this approach achieves a high level of objectivity. The projects are then programmed into the region's Transportation Improvement Program (TIP). The TAB adopts the TIP, and the Metropolitan Council concurs with their adoption.

Scoring criteria are largely based on the criteria included in the TPP; however, the **criteria are revisited and revised by the TAB after each regional solicitation cycle to ensure that they solicit the right type of information from applicants needed to assist the selection process.**

2011 TE Criteria include the following (the Met Council is in the process of preparing new applications for Map 21 – Transportation Alternatives):

<u>Bicycle and Pedestrian Pathway Group</u>

- **Urgency/Significance** (200 points). Discuss how the project proposes or addresses each of the following:
    - Takes advantage of a time-sensitive opportunity, e.g., a willing landowner, cost savings, affiliation with another project, competing development opportunities.
    - Addresses a significant opportunity, un-met need or problem as relates to the development of an integrated bicycle or pedestrian transportation network; or providing a safe/enjoyable bicycle or pedestrian route.
- **Impact** (300 points). Discuss how the project addresses each element below:

A. Bike/Ped Infrastructure:

- Fills gaps, overcomes barriers, connects system segments and/or otherwise seizes on a significant opportunity in pedestrian/bicycle network.
- Project provides a high-demand facility or program. Relative levels of demand will be determined using population density and connections to significant travel attractors. Destinations can be recreation areas such as parks, beaches, rivers, lakes, etc.; or commercial or mixed-use districts, major employment areas or other major cultural destinations.
- Addresses safety concerns.

B. Bike/Ped Programs (QA #2):

- Significantly improves safety/behavior of bicyclists and pedestrians.
- Increases market share/use of bicycling and walking.
- Fills gaps in existing programs. Describe the target audience in this program and how they would benefit from these activities or programs.

- Provides more than a local benefit. An example of such a program is a bicycle/pedestrian safety program conducted in several school districts.

- **Relationship between Categories** (100 points). Projects will score higher if they provide multiple benefits toward the purpose of the Transportation Enhancements program.

- **Relationship to Intermodal/Multimodal Transportation System** (100 points). Discuss how the project will function as a component and/or enhancement of the transportation system:

  - How will the bicycle or pedestrian facility benefit the experience of users of the transportation system?

  - How will the project benefit multiple modes of transportation? An example of a project that would do this would be a bicycle facility that connects to a transit center or a mixed-use pedestrian-oriented district, or a pedestrian project that is a component of a transit-oriented development.

  - How does the facility serve trips that would otherwise be made by motor vehicles?

- **Development Framework** (100 points)

  - If the project is a trail project, does it help to connect to or complete the Metropolitan Council's Regional Trail network? How so? If the project is on part of the Regional Trail system, it must be identified in a Metropolitan Council-approved master plan.

  - Briefly describe how the project implements the Bicycle and Pedestrian Plan in the 2030 Transportation Policy Plan (2009).

- **Maturity of Project Concept** (200 points). Points under this criterion are assigned based on how many steps have been taken toward implementation of the project. These steps reflect a federally funded project development path.

<u>Streetscape/Pedestrian Enhancements</u>

- **Urgency/Significance** (200 points). Discuss if/how the project proposes or addresses each of the following:

  - Takes advantage of a time-sensitive opportunity

  - Addresses a significant opportunity, un-met need or problem as relates to the development of a pedestrian transportation network or providing a safe and pleasant pedestrian route and supporting transit riders.

- **Impact** (300 points). Projects will score higher if it is located on an important transit route and significantly improves the pedestrian environment.

- **Relationship between Categories** (100 points). Projects will score higher if they provide multiple benefits toward the purpose of the Transportation Enhancements program. Applicants should review the respective category criteria to determine the extent to which the project relates to the other two categories: What is the relationship with the Bicycle/Pedestrian Connections group? Does the project include amenities or facilities for bicycles? Does it facilitate any new connections pedestrian or bicycle connections?

- **Relationship to Intermodal/Multimodal Transportation System** (100 points). Discuss how the project will function as a component and/or enhancement of the transportation system: How will the project benefit multiple modes of transportation?

- **Development Framework** (100 points). How does the project improve the accessibility and ease of use of transit?

- **Maturity of Project Concept** (200 points). Points under this criterion are assigned based on how many steps have been taken toward implementation of the project. These steps reflect a federally funded project development path

Metropolitan Council staff indicated that about **one-half of bicycle and pedestrian improvements have been funded through the Surface Transportation Program** (STP). Most often bicycle and pedestrian improvements are part of a minor arterial project. The STP criteria prioritize projects that serve multiple modes of transportation (up to 130 points out of 1,200 total points); therefore, minor arterial projects that include bicycle and pedestrian improvements are scored higher. This provides an incentive to integrate bicycle and pedestrian improvements with roadway projects. The Metropolitan Council conducted an audit of all minor arterial projects funded through STP and found the majority of those projects included bicycle facilities, demonstrating that the incentive achieved its purpose.

According to Metropolitan Council staff, the Congestion Mitigation Air Quality (CMAQ) program does not place a priority on bicycle or pedestrian projects.

There are many entry points for funding. Metropolitan Council staff indicated that it is difficult determine “how much” is allocated to pedestrian and bicycle projects since at least one-half of the projects are funded through roadway or bridge projects in the STP that do not include a line item cost for pedestrian and bicycle improvements.

Each member of the TAB is assigned one criterion and one person reviews all the projects against the one assigned criterion. This is done in an effort to avoid a member of the TAB “stacking the deck”.

III. Topical Comparisons and Precedents

This section presents information on bicycle and pedestrian planning and programming on a topical basis. Each example below represents an uncommon, and possibly, emerging approach to multimodal transportation policy, planning and implementation.

Regional Prioritization

Delaware Valley Regional Planning Commission

The Delaware Valley Regional Planning Commission (DVRPC) was created by the Pennsylvania and New Jersey Legislatures in 1965. DVRPC is the federally designated Metropolitan Planning Organization for the Philadelphia--Camden--Trenton Metropolitan Area, serving Bucks, Chester, Delaware, Montgomery, and Philadelphia counties in Pennsylvania, and Burlington, Camden, Gloucester, and Mercer counties in New Jersey. Its service area covers about 4000 square miles and encompasses 353 individual municipalities, including the major cities of Philadelphia and Camden.

Though involved in all aspects of the region's growth and development, the largest part of DVRPC's agenda concerns the efficient transportation of people and goods.

Shifting Gears Report

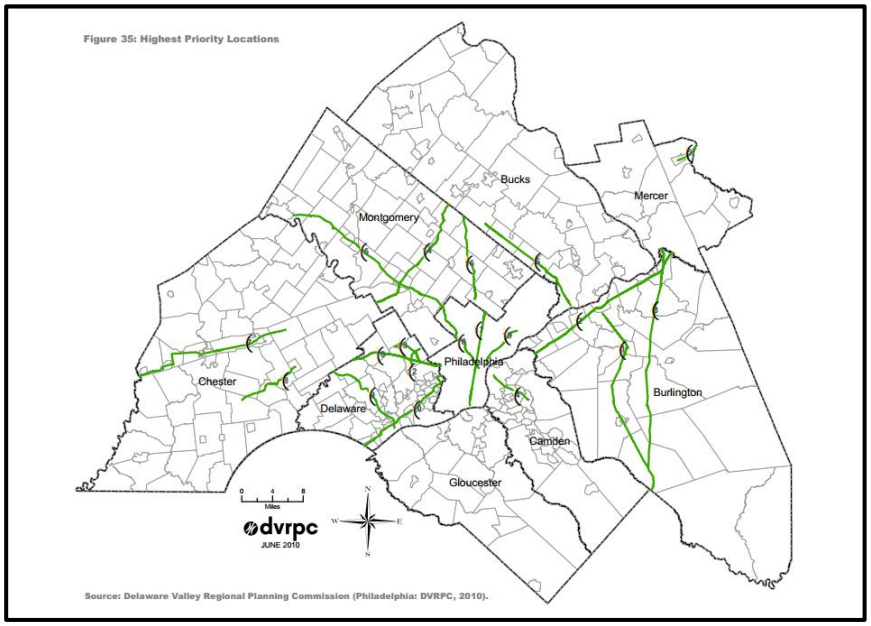
The Shifting Gears report was prepared by the DVRPC's Office of Transit, bicycle and pedestrian planning that summarizes a regional outreach effort aimed at identifying and prioritizing a regional bicycle network. It was described by one staff person as a way for staff to re-introduce the office into the regional planning process and draw more attention to bicyclists' needs at the regional level. As a result of the plan, the office has become more involved in county-level planning. The plan development process also generated a great deal of bicycle facility data, which has been used for other purposes such as funding applications.

While bicycle facility projects in the Shifting Gears report are not expected to become projects for consideration in the TIP, parts of the report are used by member jurisdictions in funding applications for projects, such as Safe Routes to School projects. Because the region is home rule-oriented, it is difficult to adopt a regional approach to road management projects. Instead, the Office of Transit, Bicycle and Pedestrian Planning supports project decisions made by the counties and cities.

The Shifting Gears report outlines a three-step process that included inventories of regional bicycle facilities, outreach to stakeholders, and an online survey. Included are descriptions of each of the various components of the program, a set of proposed priority locations based on the inventories and outreach sessions, and survey findings.[8]

[8] Information on the Shifting Gears report was taken from the report Executive Summary and a follow-up conversation was conducted with Dan Nemiroff, Transportation Planner

- The **inventory/outreach process** identified recommended priority locations in each of DVRPC's nine constituent counties. These locations were prioritized based on a number of criteria, including
    - volume of bicycle-related crashes,
    - proximity to regional attractors, and
    - location relative to other bicycle facilities.
- Priority locations highlighted are depicted with 1/2-mile buffers around the chosen corridor (1/4-mile in Philadelphia).
- Bicycle use in these locations should be studied further to determine what (if any) safety issues are present, as well as issues surrounding accessibility
- An **online survey** which was completed by over 1,800 residents of the Delaware Valley identified locations for improvements. In the survey,
    - Respondents answered questions about their level of bicycling experience, preferred bicycle uses, and preferences in bicycle facilities.
    - Additionally, non-cyclists were asked for input regarding improvements that could potentially motivate them to try bicycling.
    - Survey respondents also supplied recommendations on which specific roadway locations in the region could be enhanced from a bicycle perspective. These locations were compared to the priorities established in the outreach and inventory process.
- Locations that evolved as priorities through both the outreach and criteria-based process were included in a single table and mapped. (Table 1 and Table 5 and depicted in Figure 35 on page 73.) These locations were considered the highest priority locations. See map below.



Four other recommendations in the report are:

Focus on safety. In planning and building new bicycle facilities, as well as maintaining current ones, the safety of cyclists, as well as other users should be foremost. All bicycle-related studies should emphasize safety.

Enhance local mobility. Survey evidence seems to indicate that the most prevalent uses of bicycles (outside of recreational use) are not work trips but for purposes such as shopping or visiting with friends. Focusing on local networks to enhance local mobility is just as important as building regional networks.

Share information. In assembling the various components of this project, one challenge was getting together all the relevant (current) data on bicycle facilities. Stakeholders should make sure to work together to ensure all information is up-to-date and easily accessible.

Think low-cost. An advantage of bicycle infrastructure is that it can be inexpensive compared to other transportation modes. Recent projects have proven that even with limited funding, significant bicycle infrastructure can be built.

Performance-Based Planning and Evaluation

Metropolitan Transportation Commission (San Francisco Metro Area)

The Metropolitan Transportation Commission (MTC) is the transportation planning, coordinating and financing agency for the nine-county San Francisco Bay Area. Two additional agencies - the Bay Area Toll Authority (BATA) and Service Authority for Freeways and Expressways (SAFE) fall under the MTC umbrella. The area covered by the MTC has eight primary public transit systems and numerous local transit operators. The agency serves over 7.1 million people in an area of 7,000 square miles.

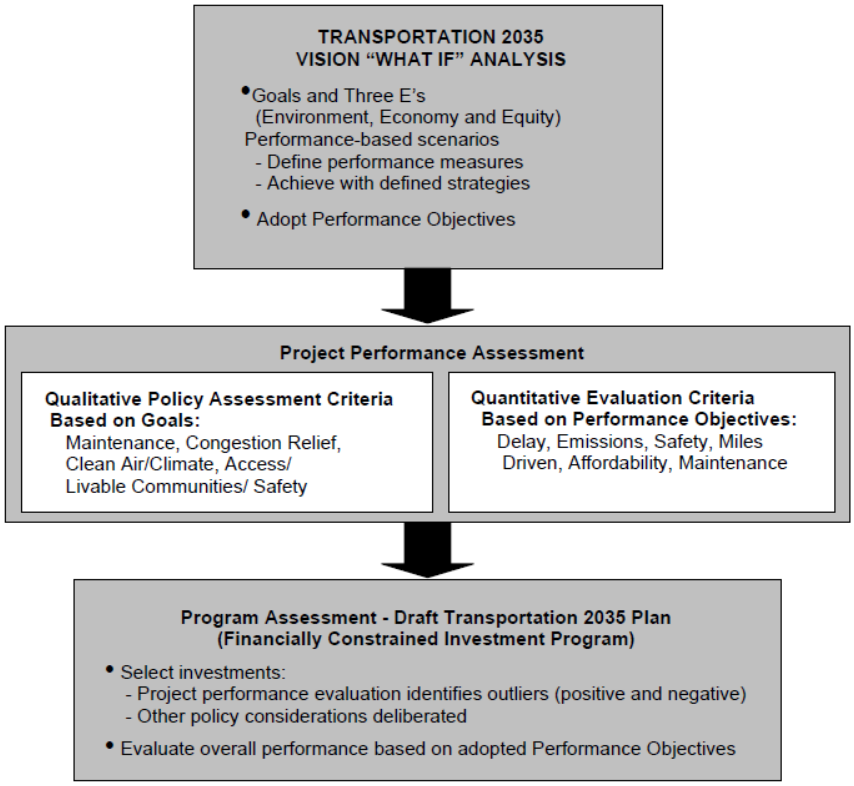
MTC functions as both the regional transportation planning agency and metropolitan planning organization (MPO).

The area's regional transportation planning document is called *Transportation 2035: Change in Motion* (an update is expected to be adopted in 2013). The plan represents a new approach with a heavy focus on climate change and the reduction of greenhouse gases. The Performance Assessment Report is a companion document. It provides a decision support tool to evaluate both transportation policies and investments. Performance-based planning is systematic and analytic in that it:

- expresses policy in terms of quantifiable objectives;
- relies on analytic methods to predict the impacts of different types of investments on system performance;
- sets-up an analytic framework for periodic monitoring of system performance; and
- assesses performance trends and provides the MTC the opportunity to make adjustments in either the performance measure or the investment priority when needed.

With the Transportation 2035 Plan, MTC committed to making performance information available well in advance of key policy and investment decisions. To set the stage at the start, MTC identified a set of ambitious performance objectives reflecting dramatic changes in our expectations for the region's transportation system. Past transportation plans have projected conditions such as delay and emissions

will worsen considerably over time as the region grows. MTC felt it important to articulate a vision in which conditions actually improve and thus established performance objectives that call for sizable reductions in delay, emissions, and driving. To determine whether the performance objectives are achievable and what it might take in terms of investment and policy to get there, MTC started with a Vision or "What If" Analysis. A second phase of analysis comprised the Project Performance Assessment, in which MTC reviewed the cost-effectiveness of potential investments with respect to the performance objectives. To close the circle, MTC conducted a third performance assessment to measure the contribution toward the performance objectives expected with the financially constrained program of investments in the Draft Transportation 2035 Plan.



The plan sets performance objectives that address the Three E's: Economy, Environment, and Equity.

The performance objectives are as follows:

- Economy: Improve maintenance, reduce injuries and fatalities, reduce delay and increase reliability, freight
- Environment: clean air, climate protection – reduce VMT and emissions
- Equity – access and livable communities – improve affordability

The plan notes that bicycles and pedestrian deaths represent 24% of Bay Area fatalities, 50% higher than national average. As a result, it establishes performances objectives to address economic impacts of pedestrian/bicycles collision and fatalities, and sets an objective to reduce injury and fatality collisions involving bicycles and pedestrians by 25% each region-wide by 2013.

It also designates plan expenditures by mode and by function – bicycle and pedestrians at 2%, or $4 billion out of budget of $218 billion.

Project-Level Qualitative Assessment Summary

To work toward the objectives related to maintenance, congestion relief, emissions reduction, focused growth, access and safety, the plan implemented a qualitative policy assessment of possible projects against the Three E's – targeting projects that yield a high financial return for invested funds and address multiple goals.

Transportation 2035 funds several targeted programs that fund bicycle and pedestrian improvements, centered on smart growth and access to transit, stating that "focused growth pays mobility, livability dividends" (p. 72).

- The *Lifeline Transportation Program* focuses on mobility and accessibility for low-income communities and
- The *Transportation for Livable Communities Program* – finances projects that improve pedestrian access to housing and transit through bicycle and pedestrian improvements.

In addition, the plan designates Priority Development Areas (PDAs) to direct growth and improvements toward transit-dense areas.

Project Prioritization Criteria

Performance measurement criteria for both the project and corridor levels were established to evaluate and prioritize new investments for consideration in the Regional Transportation Plan.

In regard to pedestrian improvements, the Regional Bicycle and Pedestrian Program Guidelines /Criteria establish the following project eligibility criteria:

- Project Readiness
- Projects meeting the Project Eligibility Criteria will be prioritized and recommended for funding based on the degree to which they:
    - Provide bike and/or pedestrian access to regional transit / lifeline transit, schools, regional activity centers
    - Eliminate major gap or obstacle in a bike or pedestrian facility
    - Have community support, as indicated by inclusion in an adopted plan or other document endorsed by community advisory groups
    - Address safety concerns
    - Provide local matching funds
    - Are regionally significant.

Contact: Ashley Nguyen — 510.817.5809
anguyen@mtc.ca.gov

North Central Texas Council of Governments (NCTCOG)

Any transportation project funded through the NCTCOG's Sustainable Development Funding Program is required to respond to performance measures established Mobility 2035, the Regional Transportation Plan. These performance measures include the following:

- Area (sf) and number of units of residential and commercial private sector development within mixed/integrated land-use projects supported by the completed infrastructure projects and funded by NCTCOG through the program.
- Number of infrastructure and planning projects funded and completed through the program.
- Number of infrastructure and planning projects funded and completed within one-half mile from a transit station through the program.

As part of the close out reporting requirement, project sponsors must provide information that is used by NCTCOG to analyze regional and community impacts of projects in terms of these performance measures. The NCTCOG withholds the final disbursement until the close-out report is submitted. Sponsors are required to update this information five years after implementation so impacts over a longer timeframe can be analyzed. This reporting does require some follow-up by NCTCOG staff because often information is omitted by locals. NCTCOG justifies this reporting requirement for accounting purposes and because it puts them in a better position to receive federal funding. As a result they have not experienced any pushback from local jurisdictions.

The NCTCOG is in the process of purchasing automatic pedestrian/bicycle count equipment in order to conduct post-evaluation of funded projects. They haven't quite worked out who would conduct the counts although their preference would be to have local jurisdictions participate in some capacity. They are considering requiring local jurisdiction participation as a condition of awarding funding. They are also anticipating that they would have to provide training on equipment installation and management, and possibly having to conduct the counts for smaller jurisdictions with limited capacity.

Other

Both DRCOG and CMAP have plans to integrate performance measure-based evaluation into their funding application and reporting in anticipation of what is required under MAP-21. Neither agency has developed performance measures or evaluation frameworks.

Communication and Coordination

DRCOG (Denver, CO)

For the last TIP cycle, training workshops were held by DRCOG prior to the due date for funding request submittals. As a minimum, training covers submittal, eligibility and evaluation, contract and development requirements for construction projects, and sponsor responsibilities. For the 2012-2017 TIP, DRCOG mandated that this training be required for project sponsors. As an outcome of this required training, those in attendance become "certified" to prepare TIP applications. Only those applications prepared by individuals in attendance at this mandatory training will be considered as "eligible" submittals.

Local governments and other eligible applicants are encouraged to discuss potential funding requests with Colorado DOT (CDOT) and/or the Regional Transportation District (RTD) as appropriate. As a minimum, this discussion should take place for any submittal for which CDOT or RTD concurrence is required. Eligible sponsors may also benefit from discussing other potential submittals, to better

understand the implications of federal requirements on the specific submittal. It may be appropriate for a peer discussion meeting to take place wherein cost, scope, and schedule could be reviewed. In addition to local staff, the peers may include DRCOG, CDOT, RTD, and other relevant agency staff.

Outside of the required training, DRCOG staff is available to answer sponsor's questions on an as needed basis.

Metropolitan Council (Minneapolis, MN)

The Metropolitan Council has a regional solicitation for projects eligible for all of the funding programs it manages every 2 years. The solicitation announcement is distributed to all cities, townships, park districts, and tribes. The Council conducts a training session on how to complete the solicitation application, including where to source needed data, and providing further detail on the rationale behind evaluation criteria.

Health Outcome-based Planning

Nashville Area MPO

The Nashville Area MPO covers a planning area of approximately 1.5 million people. The MPO includes the Nashville-Davidson and the Murfreesboro urbanized areas, as well as other small cities and rural communities within the planning area.

Health-focused Outcomes for Transportation Planning and Funding

The Nashville Area MPO is committed to forming policy, funding and research that support the improvement of health outcomes through active transportation - transportation that requires physical activity - such as transit, walking and bicycling. In December of 2010, the MPO adopted the 2035 Regional Transportation Plan which identifies health as a key component of regional quality of life, and allocates funding in accordance with economic, environmental, and health RTP goals. The RTP marks a significant shift in increasing the support for active transportation projects by established the Active Transportation Program as a component of the TIP, and putting more emphasis on positive health outcomes for transportation projects. Sixty of the one hundred points on which transportation projects are scored are based on positive outcomes for air quality, provision of active transportation facilities, injury reduction for all modes, improvement to personal health and equity of transportation facilities in underserved areas. In the final Regional Transportation Plan, 70% of adopted roadway projects include active transportation infrastructure, up significantly from the estimated 2% of projects in the 2030 plan.

According to a white paper prepared by the Volpe Center for FHWA[9], Among the most notable accomplishments of the Nashville Area MPO is its designation of STP funding, which is its primary Federal funding source for all surface transportation, for nonmotorized, transit, and technology and operations projects, as follows:

[9] Metropolitan Area Transportation Planning for Health Communities, John A. Volpe National Transportation Systems Center, Research and Innovative Technology Administration, U.S. Department of Transportation, December 2012.

- Fifteen (15) percent of funds[10] is dedicated to projects for active transportation (bicycle and walking);[11]
- Ten (10) percent of funds is dedicated to transit projects (which is in addition to other funding from the Federal Transit Administration);
- Five (5) percent of funds is dedicated to intelligent transportation systems (ITS) and operations projects;
- Seventy (70) percent of STP funds cover traditional roads projects. The MPO allocates funding based on a set of project selection criteria that includes nonmotorized enhancements, health impacts, safety, congestion reduction and additional criteria as part of road projects.

Bicycle and Pedestrian Project Evaluation/Selection

The MPO's citizen-based Bicycle and Pedestrian Advisory Committee reviews and scores non-motorized projects. This Committee helped shape the Bicycle and Pedestrian Study and developed qualitative and quantitative scoring criteria included in the Study that are used in addition to the general RTP project evaluation criteria to measure the broader value, reach, and impacts of proposed projects.

The most recent call-for-projects under the Active Transportation Program (FYs 2011-2015) provides funding for projects that meet the federal eligibility requirements associated with the Federal Highway Administration Surface Transportation Program AND advance regional initiatives to improve the availability, safety, and convenience of active forms of transportation. Funding could be used to implement a stand-alone project or supplement an existing project to ensure the inclusion of non-motorized modes (e.g., adding sidewalks to a road widening project). Eligible projects include:

- Infrastructure improvements or enhancements (e.g. projects that improve or expand the physical infrastructure to accommodate or improve access to non-motorized modes of transportation including sidewalks, bicycle lanes, shared lanes, transit stop amenities, bicyclist and pedestrian amenities, pedestrian crossings, intersection upgrades, greenways, etc.), and
- Non-infrastructure programs (e.g. projects that increase awareness and understanding of the specific needs of users of active transportation modes including planning activities and studies, public outreach efforts, and education and training programs.

Project evaluation was completed in three stages and involved participation by MPO staff and member members of the BPAC:

- *Quantitative Scoring by MPO Staff* - MPO staff applied the scoring criteria uses during the development of the 2035 Plan which includes an analysis of Level of Service (LOS), latent/potential demand and the proximity of population and employment, traffic volumes, congestion, environmental features, Title VI populations, High Health Impact areas, etc. High Health impact areas are determined using Census data (e.g. percent low income households, percent population under 18) as proxies.

[10] Funds include future allocations or appropriations of urban STP funds programmed in the TIP. The MPO will honor existing commitments to "worthy" projects already in the 2011-2015 transportation improvement program
[11] The MPO has already awarded the first round of funds for active transportation projects.

- *Qualitative Assessment by BPAC* - The BPAC performed a qualitative evaluation of each project, scoring applications from 0 (worst) to 5 (best) within each of the following categories:
    - **Infrastructure Projects:** 1. Promotion of Environmental & Personal Health, 2. Expected Utility/ Usage, 3. Contribution to the Built Environment, 4. Value over No Build/ No Action
    - **Non-Infrastructure Projects:** 1. Scope of Audience/ Reach, 2. Consistency of Message to Regional Goals, 3. Synergy with other Programs, 4. Sustainability of Effort
- *Qualitative Assessment by MPO Staff* - MPO staff developed the final rankings for projects, taking into consideration FYs 11-15 TIP budget constraints, the performance history of projects sponsors, the long-term sustainability of the project, and consistency with the 2035 Regional Transportation Plan

Project Selection occurred in three stages and involved participation by MPO staff, MPO BPAC, MPO Technical Coordinating Committee, and MPO Executive Board:

- With the MPO BPAC serving in an advisory role, MPO staff made recommendations for project awards to the TCC and MPO Executive Board
- The MPO TCC was requested to endorse MPO staff recommendations for consideration by the MPO Executive Board
- The MPO Executive Board was asked to adopt MPO staff recommendations.

Sidewalk Prioritization: City of Seattle

Prioritization of Pedestrian Improvements

Initial Approach

The City of Seattle was a pioneer in addressing substantial sidewalk deficiencies using a data-driven prioritization methodology that focused on overlapping priorities. Priorities included urban villages (areas designated for higher density, mixed-use development), schools, and service providers. A thousand foot buffer was applied to schools and service providers. High priority areas were areas where these buffers overlapped with one another and urban villages. Arterial roadways within these areas were the highest priority in order to serve transit, and then other roadways.

Refined Approach

The City subsequently developed a Pedestrian Master Plan, which further refined previous prioritization methods. The prioritization process developed in the Plan includes several different steps. A variety of factors were considered in each step in the analysis.

Step 1: Base Analysis

1a. Potential Pedestrian Demand
1b. Equity

1c. Corridor Function

Step 2: High Priority Areas
Combine the results of the potential pedestrian demand, equity and corridor function analyses from Step 1 in order to identify High Priority Areas

Step 3: Needs Assessment
Assess pedestrian needs through an analysis of conditions walking "Along the Roadway" and "Crossing the Roadway"

Step 4: Development of Project Lists
Combine the High Priority Areas analysis and the needs assessment to identify projects where conditions are difficult and where people need to be able to walk the most.

The City uses the High Priority Areas Map to inform the prioritization of a range of pedestrian improvements such as sidewalk, curb ramps, and crosswalks. The City can use this information to pursue future funding opportunities or to make focused and effective decisions if funding unexpectedly becomes available and projects need to be identified quickly. Detailed project information is equally valuable in times when budgets are constrained, as the City is asked to do more with less. As new data become available, they can be incorporated into the framework for prioritizing projects identified in this plan.

IV. NCHRP 07-17

Overview

National Cooperative Highway Research Project (NCHRP) 07-17 is a project currently underway to develop a method or series of methods that enable agencies (state, regional and local) to identify and assess pedestrian and bicycle deficiencies along existing roads, and to set priorities for improving conditions. To establish a foundation for the recommended prioritization methodology (now in draft form), the research team gathered information about existing prioritization approaches being used by agencies of different size and sophistication through a literature review, online survey, agency interviews, and case studies.

Findings from the research phases of the NCHRP 07-17 study were used to develop a draft prioritization methodology that has the following attributes:

- Allows communities to prioritize pedestrian projects independently.
- Allows communities to prioritize bicycle projects independently.
- Can be used by agencies with different amounts of data, staff resources, and technological capacity.
- Can be used by local, regional, and state agencies.
- Accommodates data from a variety of sources.
- Provides agencies with the flexibility to prioritize improvements according to the values that are most important in their local communities.

- Builds on previous research (e.g. Highway Capacity Manual Multimodal Level of Service and several other Federal Highway Administration, Institute of Transportation Engineers and NCHRP reports) and practical experience from agencies throughout the United States.
- Does not provide a way to select between different types of treatments at the same location (e.g. should a flashing beacon or a new signal be installed at a particular intersection?).

Applicability to the Atlanta Region

The draft methodology is comprised of a "user guide" that is intended to help practitioners prioritize more efficiently than they could on their own by reducing the time needed to think through each step of the prioritization process. It recommends key prioritization variables for each of nine factors, and provides considerations for scaling variables and weighting factors to reflect community values and agency policy. The user guide is accompanied by a spreadsheet tool agencies can use in its "off the shelf" form or customize to reflect the level of complexity desired or level of data available.

The draft methodology will be used to inform the recommendations presented in Technical Memorandum 3.

V. Conclusion

General Planning and Programming

The majority of peer regions reviewed evaluate and select pedestrian and bicycle projects for programming and funding using a process separate from that used for general roadway projects. The Regional Transportation Plans for each agency establishes the policies for planning and implementing bicycle and pedestrian projects within the context of the larger transportation system, but the level of detail varies. In some cases RTPs provide more specific guidance on how pedestrian and bicycle projects are to be implemented (e.g. DRCOG) while in others only high-level policies are provided (e.g. MUMPO). The connection between Regional Transportation Plans and Transportation Improvement Programs is not always clear based on reviewing relevant documents. To the degree possible this relationship was clarified by conversations with MPO staff.

Each region has established scoring criteria for prioritizing pedestrian and bicycle projects. The most common scoring criteria are:

- Connectivity/eliminating barriers
- Safety
- Demand (land use, population, employment)
- Relationship to regional plan/priorities
- Inclusion in adopted plan
- Cost effectiveness/benefit-cost
- Local match (several agencies rank projects that have more than 20% match higher, and the majority of agencies reviewed require some form of documentation of match commitment such as a Council resolution or certification form signed by an elected official)

Other criteria that were less common include:

- Emissions reduction
- Project readiness (right-of-way/easements, and level of design)
- Economic development
- Vehicle miles travel reduction
- Public health
- Urgency (i.e. takes advantage of a time-sensitive opportunity)
- Maintenance plan/agreement
- Transportation purpose (i.e. serves primarily a transportation function)
- Cooperative projects (i.e. more than one jurisdiction)

Performance-based evaluation is not a common requirement by funding agencies, although several agencies indicated that they are planning on integrating performance measures as part of its reporting and evaluation process because this is required under MAP-21. Reduction in bicycle and pedestrian crashes is relatively easy to track with data collected by most police departments. Pedestrian and bicycle counts are seen by several agencies as important data to be used in the project evaluation process. At least one agency (NCTCOG) is purchasing automatic count equipment to be used for this purpose. NCTCOG does require performance-based evaluation for projects funded through its Sustainable Development Funding Program…

The most notable and applicable communication/coordination strategy was DRCOG's requirement to have applicants attend a training that walks them through the on-line application process and answer questions related to receiving federal funding. DRCOG also has a coordinated call for projects for its TIP in which they decide which funding source is most applicable to any given proposed project.

Many of the planning and bicycle and pedestrian project programming approaches described in this technical memorandum will be further reviewed based on direction from ARC staff and stakeholders, and considered for recommendations for enhancing the ARC's evaluation of bicycle and pedestrian projects. Technical memorandum 3 will present recommendations and provide greater detail for how some of these approaches can be integrated into the Plan 2040 update and Transportation Improvement Program.