

# DRAFT

## PROJECT PRIORITIZATION PROCESS FOR TRANSPORTATION INVESTMENTS

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# MOBILITY VISION

An Austin with **an integrated mobility network** for the entire community that provides safe and efficient alternatives to driving alone, supports connected development around activity centers and corridors, and respects the limitations of our natural resources as we respond to the region’s rapid growth.

## MISSION

The Austin Strategic Mobility Plan (ASMP) will identify the best solutions to close gaps and remove barriers in Austin’s road, rail and trail systems and to connect Austin’s people, mobility systems and investments to the larger Central Texas region. The ASMP aims to extend the community’s limited fiscal resources with partnerships and new funding opportunities.

The ASMP reflects the interdependence of transportation and land use. The ASMP will work in tandem with the Imagine Austin Comprehensive Plan (IACP) and emphasizes investments which directly implement other City and regional planning efforts, including neighborhood plans and corridor plans, the Bicycle and Sidewalk Master Plans, and the CAMPO 2035 Long Range Transportation Plan.

## Overview

This document is divided into two sections, the first section provides current context that underlines the ASMP effort, the second section documents the technical review and prioritization of potential capital investments.

This report is intended to document the ASMP prioritization process for selecting mobility investments that are in line with the above vision statement and which reflects the community’s key values.

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# AUSTIN LEADING THE WAY

### The Old Paradigm - Spending

Historically, transportation infrastructure has been designed, funded and maintained to react to existing congestion by adding capacity, typically roadway. Experience across the country has shown the shortcomings of this approach, which relies on robust public subsidies to fund the infrastructure required by projected travel demands. Changing this approach is at the core of infrastructure reform initiatives at the national and local level.

It has become clear that the public sector can no longer raise and spend the funds required to build its way out of present, let alone future, congestion. Under the old paradigm, spending has hampered our mobility networks without also changing the land use and travel patterns that cause that congestion. Building better roads, along with real alternatives to driving, can change the problematic patterns that impair communities' quality of life — congestion is just the most visible symptom of the underlying problems.

Transportation spending decisions have traditionally been made in silos, disconnected from other planning efforts that also shape our built environment. In dollars, most of the nation's spending on "transportation" has increased roadway capacity. Other modes, like transit, have been operated and funded through separate mechanisms in their own silos. Funds — whether for construction, maintenance or operations — are typically allocated by future travel demand. But this approach does not link spending to the outcomes that people actually want in their communities. Instead traditional funding undermines our transportation systems and thereby our communities — from economic development to environmental sustainability and neighborhood integrity. A shift from spending to investing that supports transit, walking and biking as well as driving, can be linked directly to constructive outcomes in a way that the old road-based, capacity-focused paradigm has proven unable to do.





## Emerging Trends - Investing

Successful communities meet the needs of their people, including the need to get around. Investing in mobility is now recognized as a critical way for communities to become sustainable — producing vital, walkable mixed-use neighborhoods, offering choice in transportation modes, linking regional activity centers, revitalizing historically depressed neighborhoods and leveraging existing community assets. These and other goals have been identified by the U.S. Department of Transportation (USDOT), the Department of Housing and Urban Development (HUD) and the Environmental Protection Agency (EPA), now working in partnership to promote livable and sustainable communities.:



- A. Regional coordination through MPOs and regional blueprint growth plans that link various transportation systems and modes;
- B. Linking transportation investment to sustainable development patterns (value capture and context sensitive solutions); and
- C. Community proposal-based funding programs (such as the recent series of federal TIGER grants) that allocate funding based on the achievement of livability goals instead of through the old formulas.

Regional mobility, connecting transportation systems and modes, has become increasingly important as communities recognize the interdependence of neighborhoods and activity centers within each region. The ability for multiple jurisdictions to work together and provide users with seamless mobility is critical to the region's global competitiveness. This regional coordination is also a key way to leverage limited funds.

The focus on livability also calls for designing and funding a mobility network that supports alternatives to driving alone and walkable mixed-use neighborhoods. Investments in both “complete street” road corridors and in transit systems can be supported by the growing tax base and property values and private reinvestment that is generated by this urban development pattern, as has been shown in dozens of revitalizing American cities. This does not mean those communities have stopped building or maintaining roads — often, the best solutions for a particular mobility challenge will be ones that makes it easier for people to drive. But there are many ways to achieve better outcomes for both drivers and non-drivers other than simply adding lane miles to the road system.

Federal infrastructure agencies are recognizing these opportunities, as well as their dwindling capacity to fully fund traditional investments in road capacity, and changing their funding strategies accordingly, shifting from demand-based formulas and targeting livability outcomes. The recent awards under the federal TIGER grant program (formally, the Transportation Investment Generating Economic Recovery (TIGER) Discretionary Grants Program under the American Reinvestment and Recovery Act) underscore this shift. The three key agencies now working in partnership — USDOT, HUD and EPA — are focused on projects that link transportation, housing, transit, neighborhood vitality and fiscal capacity. This federal effort provides localities, including Austin, with guidance as they link their own transportation investments to local planning goals and fiscal realities. This will result both in better leveraging of local funding and more competitiveness for federal funding resulting in a community that is more affordable and liveable.

## Looking Ahead

The outcomes of the ASMP will look much different from the City's past transportation investment programs. Instead of chasing after traffic congestion and perpetuating a cycle of longer delays and longer trips, this program will set the stage for a new trip pattern — one that is multimodal, active and prosperous, reflects the community's established consensus vision and harmonizes with the Imagine Austin Comprehensive Plan.

The resulting mobility network will integrate multimodal systems and corridors meeting a diverse array of community needs. The development of such a system will happen incrementally over multiple funding cycles and be coordinated with complementary agencies — from the short term of the City's current five-year capital improvement plan, to the 25-year planning horizon of the CAMPO long-range transportation plan.

Creating robust mobility does come at a cost. Alternative modes may create conflicts with already congested corridors, and new transportation choices, such as rail transit, have high capital and operating costs. Over a period of transition, as Austin makes new mobility investments, trip patterns will evolve, land use patterns will react and new transportation choices will develop. This period must be faced with confidence as these incremental changes propel the community towards a future that preserves livability, ensures its sustainability, and promotes prosperity.

A new multimodal perspective will involve reprioritizing projects and initiatives along a coordinated time line that benefits all users. The inter- and interagency collaboration needed to accomplish many of these multimodal initiatives is extensive and critical. Effective multimodal mobility networks are built by multi-disciplinary plans, project development coordination, and integrated land use regulations. The narrow thought processes that have typically driven infrastructure investments must be supplanted with methods for meeting the desires of the end users — the people of Austin — for optimal livability, sustainability and mobility. At the same time, funding must be preserved to maintain and or reconstruct our aging infrastructure.

As a region, Central Texas is at the forefront of progressive land use planning, as evidenced by the Envision Central Texas (ECT) Vision and CAMPO's 2035 Plan, focused around Activity Centers. ASMP elevates transportation planning and project implementation to the same level.

The ASMP Project Prioritization Process is an entirely new approach to prioritizing transportation investments that embraces the transformative power of transportation infrastructure -- both to support and to influence land use. The ASMP reflects a growing recognition that an integrated mobility network is more than just the sum of its parts and can be leveraged to achieve the community's vision for itself.



# AUSTIN STRATEGIC MOBILITY PLAN

## COMMUNITY OBJECTIVES & OUTCOMES

The Community Objectives are drawn from the work of HUD-DOT-EPA and its Livability Principles, Interagency Partnership for Sustainable Communities, Community Workshops, Online Surveys, and Envision Central Texas (ECT). Below each Objective is an Outcome, which defines the Objective and was included in the presentation of the Objectives to the community for prioritization.

The ASMP community outreach program solicited feedback on these Objectives and Outcomes in order to assess the community's values and their relative importance. Following each Objective and Outcome are the individual criteria, or Measures of Effectiveness (MOEs), used to score how well each gap, solution, and project meets the intended goal.

### Efficiency

The value of individual mobility investments should be maximized by linking systems into a mobility network that optimizes capacity and efficiency for various travel modes and user types.

Investments should increase multimodal system capacity and integrate technologies and management strategies that make the network more efficient for Austin's diverse range of users.

MOEs:

- Implementability
- Person capacity Added
- Capital Cost per person-trip per day
- Operating Cost per person-trip per day



### Environmental Stewardship

The mobility network should be compatible with the natural and human environment and to the extent possible protect air and water quality, manage stormwater runoff, maximize urban natural habitat areas, and preserve greenspace.

Investments should reduce Austin's carbon footprint to the extent possible by providing alternatives to driving, supporting sustainable development patterns.

MOEs:

- Within Desired Development Zone (DDZ)
- Fuel consumption (reduction in VMT)
- Design consistent with Best Management Practices (BMPs)
- Access to recreation and green space
- Access to neighborhood retail centers





## Investment & Economic Development

The mobility network should support job creation, investments, and sustaining the city's tax base while being cost effective for individual users.

New mobility investments should be leveraged to attract additional federal and state funding as well as new private development and redevelopment.



### MOEs:

- Within a corridor or area planned for sustainable development patterns
- Supports sustainable development patterns
- Redevelopment and value-capture potential
- Ability to leverage public and private funds

## Mobility Choices

Austinites of all ages and physical capabilities should have good mobility solutions for getting to work, school, shopping, and recreation.

Austin should make mobility investments that improve connections between walking, biking, transit, and driving.

### MOEs:

- Added modes within project limits
- Added centerline miles of bicycle, pedestrian and multi-use trail facilities.
- Improved connections between modes
- MMLOS (multimodal level of service – bicycle LOS, pedestrian LOS, transit LOS)



## Neighborhood Coordination and Connectivity

Austin's mobility network should support the goals and objectives of adopted neighborhood plans and other neighborhood-supportive initiatives.

Pedestrian, bicycle, and transit links should encourage and facilitate neighborhood connectivity.

### MOEs:

- Supports an adopted neighborhood plan
- Connection to nearby amenities
- Connection to area beyond neighborhoods



## Regional Integration

Austin's road, rail, and trail systems should connect with and support a comprehensive and regional mobility network serving all of Central Texas.

Regional and local corridors should incorporate various transportation systems to connect Central Texas activity centers.

### MOEs:

- Included in the CAMPO 2035 Plan
- Compatibility with regional growth planning efforts to link transportation with sustainable development patterns
- Ability to leverage regional, state, or federal funding partnerships
- Project support from partnering agencies

## Safety

Austin's mobility system should be safe and provide a sense of well-being for the community.

Investments should be made to make travel as safe as possible for drivers, cyclists, and pedestrians of all ages and physical capabilities.



### MOEs:

- Number of crashes within 500 feet
- Crashes mitigated by mode
- Safety of non-automobile modes of transportation
- Safety concerns expressed about location
- Design consistent with the ITE Manual for Walkable Urban Thoroughfares

## Sustainable Growth

An efficient, multimodal context-sensitive mobility system should encourage sustainable growth.

Growth should be focused along established corridors and within identified Activity Centers.

The mobility network should enhance public-sector investments and coordinate with supportive policies.

### MOEs:

- Existing population density within 1/2 mile
- Existing employment density within 1/2 mile
- Project is within a CAMPO activity center
- Project is within 1/2 mile of an economically challenged area or targeted redevelopment area.



# TECHNICAL PRIORITIZATION PROCESS

## Project Prioritization Process Overview

The Austin Strategic Mobility Plan (ASMP) is a comprehensive and responsive community-driven approach to mobility. The ASMP equips the City of Austin to make smart, strategic mobility investments and leverage resources to create sustainable transportation systems that reflect the shared values of the community.

The ASMP is a deliberative process that provides Austin with a flexible new community-based prioritization process for mobility projects. This process helps the community and the City recognize problems, select solutions and prioritize their implementation in both the short and long term.

The ASMP Prioritization Process places Austin in the forefront of the emerging trends changing the way transportation investments are planned and funded throughout the country whereas **Austin Leading the Way** provides the context for that transformation, describes the methodology used to develop and apply the ASMP Prioritization Process.

## Methodology

The prioritization of mobility projects is a complex and iterative process, influenced by City and regional land use and transportation planning efforts. The process incorporates hundreds of “gaps” in the mobility network, identified by the community. The ASMP Project Prioritization Process is a methodical, transparent, and accountable procedure to prioritize mobility investments to address multimodal capacity and linkage gaps – missing elements – in our transportation systems according to the community’s values.

This multistage process involves (see diagram on page10):

Data Compilation

Prioritization Objectives

Prioritization Model

1. Gap Prioritization
2. Develop Solutions
3. Prioritize Projects
4. Project Coordination
5. Package Development

Validation





## Gap Collection

The ASMP process began as the City gathered extensive public input about transportation issues from citizens and local organizations, City departments and master plans, and local and regional partners. More than 1,600 gaps have been identified to date. Public forums in November 2009 (in conjunction with the Imagine Austin Comprehensive Plan) and February 2010, along with online outreach, provided the channels through which the City gathered input on gaps, as well as an assessment of the community's key values as to how to evaluate and prioritize transportation investments. The collection and assessment phase of the process does not conclude with the development of the prioritization model or the creation of any one list of projects, rather it is part of an ongoing collaborative effort by the citizens of Austin.



## Data Compilation

The ASMP master database includes hundreds of gaps identified by the community, the City, and its local/regional partners. Also compiled are planned projects from across the region, including the City, Bike Plan, Sidewalk Plan, etc., Capital Metro, and CAMPO. To date, the database includes more than 1,600 gaps, including:

- Gap projects collected through community outreach,
- Gap projects from City staff and other stakeholders,
- Currently planned projects and
- Previously assessed projects or plans (e.g., CAMPO, AMATP, Bike Plan, Sidewalk Plan, Capital Metro plans).

In order to avoid duplication of gaps, the ASMP team used a Geographic Information System (GIS) to compare gaps collected from the community with those already turned into projects and incorporated into the various plans noted above.

## Prioritization Objectives

Following a survey of the state of the practice for transportation project evaluation criteria, the ASMP team developed a summary list of eight objectives described on pages 4-6.

The establishment of these objectives was heavily influenced by the Livability Principles developed jointly by the US Department of Housing and Urban Development (HUD), the US Department of Transportation (DOT), and US Environmental Protection Agency (EPA) under their new Interagency Partnership for Sustainable Communities. These guiding principles are already being used at the federal level to evaluate projects seeking transportation funding – most notably under the recent TIGER grant program. Also informing the objectives were Envision Central Texas (ECT), the CAMPO 2035 planning process and the ASMP public involvement efforts.

The ASMP team presented these objectives to the public in forums and online, and solicited comments on their importance. Ultimately, a composite weighting expressing the relative importance of each objective, was applied to prioritization of mobility projects.

### Composite Weighting

Each element used to prioritize projects is uniquely weighted to reflect community input and technical expertise.

#### Community Input

- 1/2 of the project selection weight will be based on input given by the citizens that attended the February 2010 Mobility Forums and participated in an Online Survey.

#### Technical Allocation

- 1/2 of the project selection will be determined by the input of the professionals on the ASMP team.



The table below illustrates the weight given for each objective. The sources of input into the weighting were tabulated and averaged in order to arrive at a final weighting that will be multiplied by the total number of points scored for each project.

OBJECTIVES	WEIGHTING		
	Community Input	Technical Allocation	Composite (Average)
Efficiency	19	10	15
Environmental Stewardship	11	14	13
Investment and Economic Development	11	10	11
Mobility Choices	14	22	18
Neighborhood Coordination and Connectivity	7	8	8
Regional Integration	18	11	15
Safety	9	7	8
Sustainable Growth	12	18	15

The table below left shows the raw scoring resulting from the community forums held in February 2010. These numbers were used to develop the Community Forums Weighting listed above. Also, shown below right are numbers obtained from the City's Online survey.

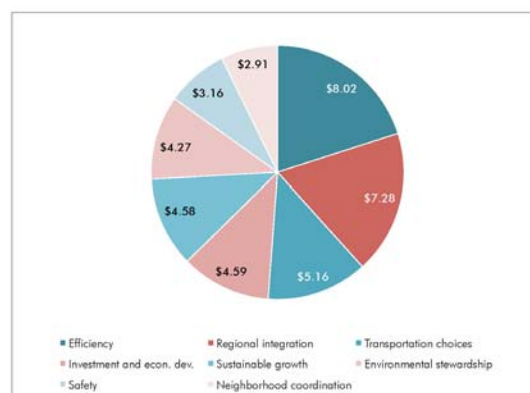
#### Austin Mobility Forums — February 2010

Workshop	Reagan HS	MACC	Bowie HS	Murchison	OTC	Widen ES	Totals	Rank
Mobility Choices	26	47	20	24	44	11	172	1
Sustainable Growth	10	51	10	25	37	7	140	2
Regional Integration	12	36	39	10	25	4	126	3
Efficiency	13	13	30	13	32	9	110	4
Safety	13	17	38	7	13	8	96	5
Investment & Economic Development	1	21	13	17	26	3	81	6
Environmental Stewardship	14	17	10	9	24	6	80	7
Neighborhood Coordination	11	17	14	11	8	2	63	8
Additional values proposed by citizens:								
Added Capacity (esp. SH 45)	0	0	34	13	3	0	50	
Cost-Effectiveness for Users	4	0	0	0	12	0	16	
Others (10 total)	3	10	9	0	6	0	28	

Source (above): At six community forums participants were asked to identify which of the eight community values were most important to them.

Source (below): Online survey  
[WWW.AustinStrategicMobility.com](http://WWW.AustinStrategicMobility.com)

#### Online Survey #1: What makes a great transportation system? RESULTS as of March 29, 2010 • 1,056 total responses



Q1: You have 40 dollars to spend. Look at the following eight statements and indicate how much of your \$40 you'd spend to achieve each of these objectives.

You can spend all \$40 on one, or \$5 on each, or any other combination you choose, but you must spend all \$40.

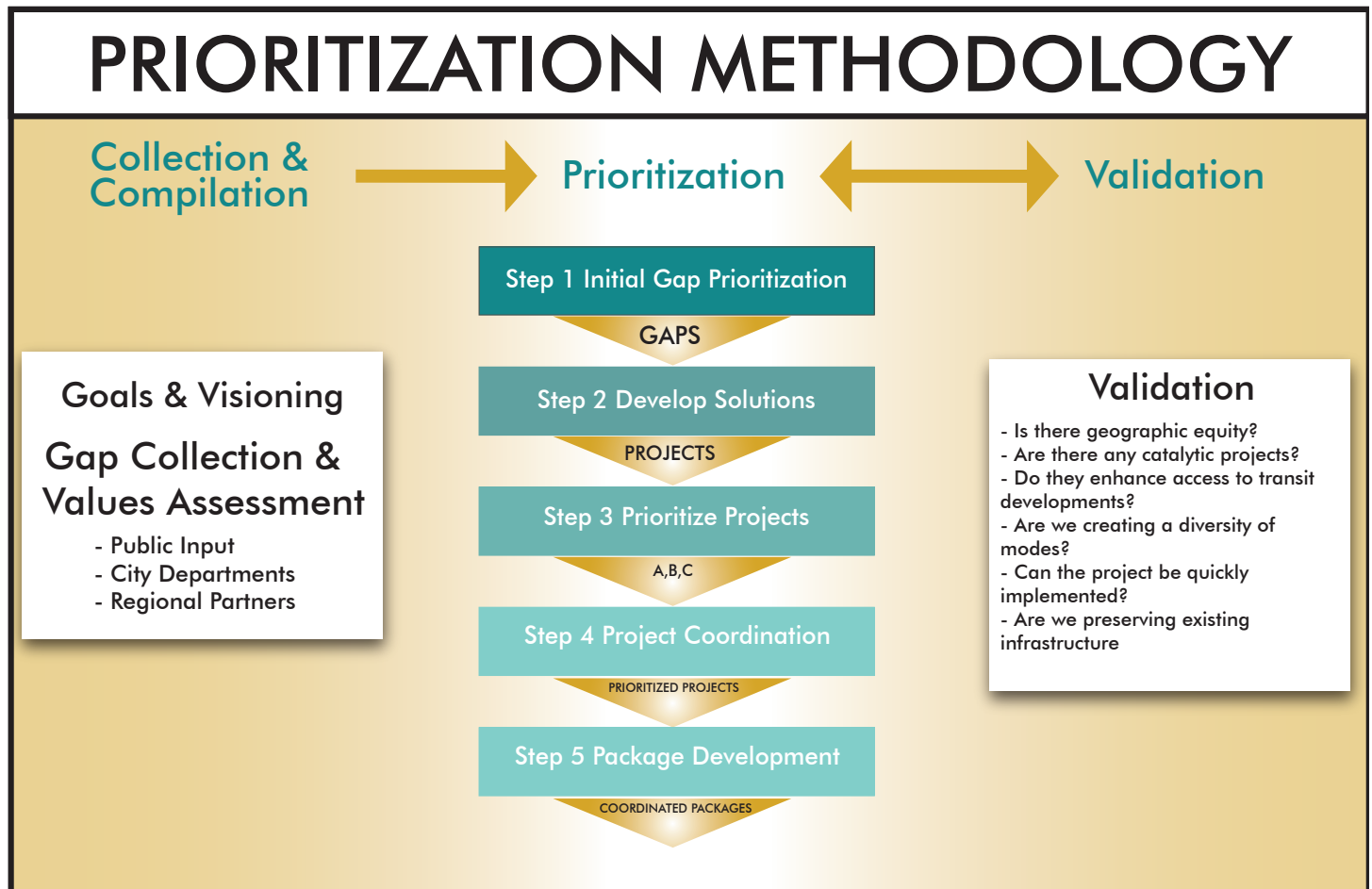
These statements matched up with the same eight community values tested in the Austin Mobility Forums.

The top three choices of survey respondents — efficiency, regional integration, and transportation choice — combined for more than half of respondents' preferred investments.

Note: On this chart, we've recalculated the average investment in each item to total \$40. The relative weighting of each item is unchanged.

## Prioritization Model

The ASMP team has developed a prioritization model for use in selecting transportation projects that align with Austinites' values as defined during the Gap Collection and Values Assessment stage and reflected in the eight ASMP Objectives and Outcomes. The prioritization model prioritizes gaps, evaluate solutions and prioritizes projects according to the following methodology:



## Step 1 Gap Prioritization

The first step in processing gaps is to apply each objective's composite weight to its step 1 Measures of Effectiveness (MOEs) listed below. This step is largely automated and performed using readily available data in GIS. This gap prioritization focuses staff resources on the most important transportation issues by removing duplicates (either multiple gap comments for the same issue or overlapping community-identified gaps and existing CIP projects, for instance) and measuring the relative importance across all gaps. This process determines which gaps are suited for short or for long-term consideration. Higher priority gaps identified in this step are passed to the next step, where more detailed information is collected and additional evaluation is performed. Those gaps not advanced to step 2 remain in the database as they may require further study or definition and consideration during subsequent funding cycles.

All gaps in the database are scored using the step 1 MOEs listed below with their corresponding objective:

OBJECTIVES	MEASURES OF EFFECTIVENESS (Step 1)
Efficiency	Implementability
Environmental Stewardship	Within Desired Development Zone (DDZ)
Investment and Economic Development	Within a Corridor or area planned for sustainable development patterns
	Supports sustainable development patterns
Mobility Choices	Added modes within project limits
Neighborhood Coordination and Connectivity	Supports an adopted neighborhood plan
Regional Integration	Included in the CAMPO 2035 plan
Safety	Number of crashes within 500 feet
Sustainable Growth	Serves existing population density within 1/2 mile
	Serves existing employment density within 1/2 mile
	Inside a designated CAMPO Activity Center
	Serves (within 1/2 mile) an economically challenged area or targeted redevelopment area

## Step 2 Develop Solutions

The gaps advanced from step 1 are analyzed to determine the range of potential solutions, though some gaps will notably have only a single solution, whereas others may have several. The defined alternatives are scored during step 2 in order to select the optimal gap solution by applying the step 2 MOEs.

During this step, alternative solutions are scored only against other alternatives for the same gap, rather than against all potential solutions for all gaps. Once a solution is identified it becomes a project that is prioritized, along with all other selected projects.

OBJECTIVES	MEASURES OF EFFECTIVENESS (Step 2)
Efficiency	Implementability
	Person Capacity Added
	Capital Cost per person-trip per day
	Operating Cost per person-trip per day
Environmental Stewardship	Within Desired Development Zone (DDZ)
	Fuel Consumption (VMT reduction)
	Access to recreation and green space
Investment and Economic Development	Within a Corridor or area planned for sustainable development patterns
	Supports sustainable development patterns
Mobility Choices	Added modes within project limits
	Added centerline miles of bicycle, pedestrian and multi-use trail facilities
Neighborhood Coordination and Connectivity	Supports an adopted neighborhood plan
	Connection to nearby amenities
Regional Integration	Included in the CAMPO 2035 plan
	Project support from partnering agencies
Safety	Number of crashes within 500 feet
	Crashes mitigated by mode
	Safety of non-automobile modes of transportation
Sustainable Growth	Serves existing population density within 1/2 mile
	Serves existing employment density within 1/2 mile
	Inside a designated CAMPO Activity Center
	Serves (within 1/2 mile) an economically challenged area or targeted redevelopment area



### Step 3 Project Prioritization

The list of projects advanced from step 2 is prioritized using the step 3 MOEs. Projects are scored and grouped (A, B, and C), according to relative priority. Group A projects are most likely to make it into the current 2010/2011 bond cycle. In order to further define the implementation step 3 prioritized projects a more detailed analysis and cost estimate may be prepared.

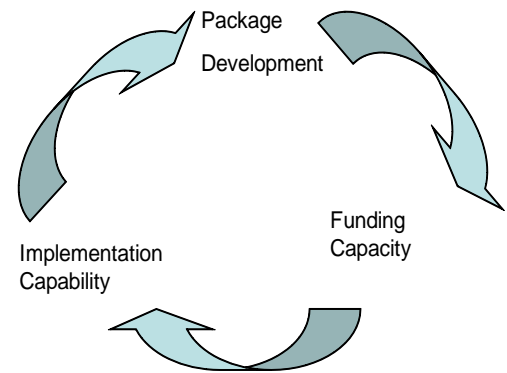
OBJECTIVES	MEASURES OF EFFECTIVENESS (Step 3)
Efficiency	Implementability
	Person Capacity Added
	Capital Cost per person-trip per day
	Operating Cost per person-trip per day
Environmental Stewardship	Within Desired Development Zone (DDZ)
	Fuel Consumption (VMT reduction)
	Access to recreation and green space
	Design consistent with best practice
	Access to neighborhood retail centers
Investment and Economic Development	Within a Corridor or area planned for sustainable development patterns
	Supports sustainable development patterns
	Redevelopment and value-capture potential
	Ability to leverage public and private funds
Mobility Choices	Added modes within project limits
	Added centerline miles of bicycle, pedestrian and multi-use trail facilities
	Improved connections between modes
Neighborhood Coordination and Connectivity	Supports an adopted neighborhood plan
	Connection to nearby amenities
	Connection to area beyond neighborhoods
Regional Integration	Included in the CAMPO 2035 plan
	Project support from partnering agencies
	Compatibility with regional growth planning efforts to link transportation with sustainable development patterns
	Ability to leverage regional, state, or federal funding partnerships
Safety	Number of crashes within 500 feet
	Crashes mitigated by mode
	Safety of non-automobile modes of transportation
	Responds to expressed safety concerns
	Design consistent with the ITE Manual for Walkable Urban Thoroughfares
Sustainable Growth	Serves existing population density within 1/2 mile
	Serves existing employment density within 1/2 mile
	Inside a designated CAMPO Activity Center
	Serves (within 1/2 mile) an economically challenged area or targeted redevelopment area

## Step 4 Project Coordination

The near-final list of prioritized projects is then reviewed in order to identify synergistic projects that can be combined to create complete corridors. Project coordination is a technical scrub to find overlaps in previously planned areas or projects. For instance, a street rehabilitation initiative can be combined with a bike lane project or sidewalk rebuild, or an intersection improvement can be combined with an ADA improvement. This technical scrub is a critical step that leverages higher scoring projects to elevate related projects that make sense to combine. The prioritization model is great for establishing relative importance but it isn't perfect. Professional judgement is necessary to overcome its inherent limitations.

## Step 5 Package Development

One of the final steps in the project prioritization process is assembling projects into packages. For 2010/2011, for instance, the process will yield two bond packages. Considerations critical to this step include an assessment of available funding capacity and implementation capability. This is an iterative process, whereby preliminary budgets inform preliminary package sizes, which are then checked for implementability, or can City staff get the package into the pipeline or are there enough contractors out there to do the work in a timely manner, etc.



## Validation

This is a final reality check for the City staff to review the output of the Technical Prioritization Process to verify that the packages of projects are still aligned with the ASMP vision/mission and the prioritization objectives.

The following questions should be explored during the validation process.

- Is there Geographic Balance?
- Are there any Catalytic Projects?
- Do they Enhance Access to Transit Developments?
- Are we Creating a Diversity of Modes?
- Can the Project be Quickly Implemented?
- Are we preserving existing infrastructure?
- Is there any pertinent new information or missed opportunities that need to be addressed?