MOVEPGH
PROJECT EVALUATION CRITERIA *December 7, 2012*

The project criteria presented here are intended to express measures of effectiveness for proposed candidate projects with regard to the five Community Goals developed through the initial public and stakeholder outreach efforts of MOVEPGH. These are to be used principally to assign basic scores to projects, allowing them to be ranked in order of the score as a first step at prioritizing projects. The actual prioritized list is likely to differ from this list and will be refined based on staff and stakeholder input later in the process, but these are the metrics we will use to understand a particular project's responsiveness to the five MOVEPGH goals. To determine scores, values of 1 to 5 will be assigned to a candidate for each metric (and the ways in which these values are assigned are explained on the tables on the following pages). Within each goal, the sum of these values would be divided by the total number of metrics for that goal. This is intended to keep one goal from being weighted over another: for example, if the balanced choices goal had only four metrics and the healthy environment goal has six, the total score for balanced choices would be divided by four and the score for healthy environment by six, meaning each goal would thus yield a maximum composite score of 5 and thus each goal has equal importance in being met. The merged score for each goal is then added, yielding a maximum project score of 25.

EXAMPLE: *Candidate Project A*

GOAL 1		GOAL 2		GOAL 3		GOAL 4		GOAL 5		
METRIC	***SCORE***	***METRIC***	***SCORE***	***METRIC***	***SCORE***	***METRIC***	***SCORE***	***METRIC***	***SCORE***	
Metric 1.1	4	Metric 2.1	1	Metric 3.1	1	Metric 4.1	1	Metric 5.1	1	
Metric 1.2	5	Metric 2.2	5	Metric 3.2	1	Metric 4.2	3	Metric 5.2	3	
Metric 1.3	3	Metric 2.3	5	Metric 3.3	3	Metric 4.3	3	Metric 5.3	2	
Metric 1.4	1	Metric 2.4	1	Metric 3.4	3	Metric 4.4	2	Metric 5.4	2	
		Metric 2.5	4	Metric 3.5	4	Metric 4.5	4	Metric 5.5	2	
		Metric 2.6	3	Metric 3.6	1	Metric 4.6	5	Metric 5.6	4	
				Metric 3.7	3	Metric 4.7	1			
TOTAL SCORE	13	TOTAL SCORE	19	TOTAL SCORE	16	TOTAL SCORE	19	TOTAL SCORE	14	
Divide by number of metrics **(4)**		Divide by number of metrics **(6)**		Divide by number of metrics **(7)**		Divide by number of metrics **(7)**		Divide by number of metrics **(6)**		SUM OF ALL COMPOSITES (overall project score for ranking)
Composite for Goal	3.25	Composite for Goal	3.17	Composite for Goal	2.29	Composite for Goal	2.71	Composite for Goal	2.33	**13.75**

GOAL 1: Provide Balanced Choices that strengthen Pittsburgh as a regional hub		
Name and description of metric	*How scores are assigned*	*What this metric can be used to calculate/estimate*
1.1 - Modal Options The Modal Options metric will evaluate the existence of non single occupancy vehicle modes, including bicycle, transit and pedestrian components to be evaluated by direct access, proximity, and connectivity. Projects will be evaluated through qualitative efforts and GIS analysis.	Projects that will tend to diversify Pittsburgh's transportation system will be prioritized: 1 – Substantial increase only to SOV capacity 2 – Increase only to SOV capacity 3 – SOV capacity with minor bike/ped benefit 4 – Bike/ped or transit benefit 5 – Benefit to 2+ modes	Can be used in modeling to estimate bicycle and transit usage propensity
1.2 - Street Congestion Reduction of traffic congestion improves air quality by reducing automobiles' idle time and reduces time spent in travel. Candidate projects were evaluated on reduced travel times from the baseline.	Based on measured travel time: 1 - adds significant congestion 2 - adds some congestion 3- neutral 4 - eliminates some congestion 5 - eliminates significant congestion	Potential for reduced greenhouse gas emissions such as CO_2 associated with idling and congestion. Approximately 4 percent of total vehicle emissions is associated with idling. Projects performing well in this metric may tend to be either street capacity or transit projects.
1.3 - Street Options An effective way to reduce congestion is to provide multiple ways to accomplish the same trip. An example would be a project providing new street connections across rail corridors; connecting two communities in close proximity that currently have no existing connection. Connections across defined travel shed boundaries are also significant and should be given priority accordingly. This metric is a qualitative assessment of how a street project can provide new connections to the existing street network, thereby providing new ways to accomplish the same trip or connecting areas that currently have no direct connections.	Based on relief to an arterial or new connections between neighborhoods or travel sheds: 1 - removes more than one network option or separates neighborhoods or travel sheds 2 - removes one network option 3- neutral 4 - adds one network option 5 - adds or opens multiple network options or connects neighborhoods or travel sheds	Allows an understanding of 'system' road capacity, or non-arterial road capacity.

GOAL 1: Provide balanced options for enhanced mobility		
Name and description of metric	*How scores are assigned*	*What this metric can be used to calculate/estimate*
1.4 - Connectivity Measure Streets designed for multiple modes of travel helps create better transit, pedestrian and bicycle networks. This metric promotes an integrated approach for all modes of transportation.	1- lowers link/node ratio 3 - no change 5- improves link/node ratio	Overall walkability/bikability and propensity for walk/bike trips.

GOAL 2: Support diverse economy through Sustainable Infrastructure Spending		
Name and description of metric	*How scores are assigned*	*What this metric can be used to calculate/estimate*
2.1 - Unique Financing Projects were given preference if a specific financing source was dedicated for the project. Funding could include earmarks or TIF/BID financing.	3 - standard funding sources 5 - unique finance (BID, tolls, etc.)	Available conventional transportation funds that could be used to fund other projects not likely to qualify for funding (such as trail and transit projects).
2.2 – Economic Development This metric was based on a qualitative assessment of cost and value estimates.	1 - damages adjacent economic opportunity 3 – neutral 4 - somewhat improves 5 - greatly improves	
2.3 - Project Cost The Project Cost metric was developed to analyze the unit cost of a project and its impact to the overall transportation network. Special preference was given to projects considered "low hanging fruit" such as bike striping, traffic signals, intersection realignments and other intersection improvements.	1 - large per mile cost 3 – average 5 – low per/mile cost or intersection project	

GOAL 2: Support diverse economy through Sustainable Infrastructure Spending		
Name and description of metric	*How scores are assigned*	*What this metric can be used to calculate/estimate*
2.4 - Concurrency with City Mobility Measures whether or not a project tends to reward long-distance trips.	1 - project accommodating long-distance trips 3- promoting long-distance trips, but serving critical need 5 – promoting short trips	
2.5 - Project Utility Preparing for growth includes increasing the capacity to carry higher levels of traffic in key areas. This metric utilized the travel demand model to determine future capacity of candidate projects. Capacity was measured by comparing future traffic volume from the baseline.	1- degrades people movement 2- maintains 5 – improves Candidate projects types that cannot be modeled will not be evaluated by this metric.	Increased vehicular volumes can result in increased fuel use and increased VMT (addressed under Metric 3.5).
2.6 - Facilitate Goods Movement Appropriate roadway design is critical to ensure trucks are able to reach local retail, industrial activity, and multimodal distribution facilities. Candidate projects along the exiting truck route network were evaluated on their ability to facilitate future truck movements. The truck network was defined based on arterial routes.	1- Degrades truck route(might include elements such as roundabouts that impede movement) 3 – neutral 5 – improves	Potential for reduced greenhouse gas emissions such as CO_2 associated with idling and congestion.
2.7 - Parking Facilities Candidate projects were qualitatively assessed for their ability to create on street parking opportunities and/or do not adversely impact access to surrounding parking opportunities.	1 – removes in area of need 2 - removes 3 - no effect 5 - adds	Potential for reduction in parking requirements in areas of development. Reduced parking also can translate to less impervious surface coverage (addressed under Metric 3.6).

GOAL 3: Provide a Safe, Accessible and Healthy Environment to live, work, play, learn, and thrive		
Name and description of metric	*How scores are assigned*	*What this metric can be used to calculate/estimate*
3.1 - Operational Safety Intersections with a high number of crashes were identified throughout the city. Often, the likelihood of accidents to occur at an intersection can be significantly reduced through proper design. Project corridors that included "critical intersections" would include designs techniques to reduce future accidents. "Critical Intersections" were identified as locations of greater than 20 accidents per year.	1- tends to increase crashes on bike/ped corridor 2 - tends to increase crashes 3 - no safety effect 4- tends to reduce crashes 5- tends to reduce bike/ped crashes	
3.2 - Walking and Biking Accessibility Connections for pedestrians and bicyclists to reach parks, schools and other community facilities promotes safe opportunities for exercise, increase the number of children walking to school and the choice to complete shorter trips by means other than the automobile. Using GIS, a quarter mile buffer was drawn around community facilities (school, libraries, parks, recreation centers).	1 - Projects performing in the bottom fifth in providing connections to community facilities 2 – 2nd lowest fifth 3 – Middle fifth 4 – Second highest fifth 5 – Highest fifth	Overall walkability and propensity for walk trips. Similar efforts have used street connectivity and the presence of alternative transportation forms as a basis for measuring health indicators (such as average body mass index).
3.3 - Access to Healthy Food Sources Considers access to full-service grocery stores, community gardens and farmers markets as a source of fresh food that contributes to a balanced, healthy diet.	Projects that shorten length, provide transit service or otherwise facilitate access to grocery stores. 1 - degrades access to quality food in vulnerable community 2 - degrades access 3 - no effect 4 - improves access 5 - improves access in vulnerable community	

GOAL 3: Provide a Safe, Accessible and Healthy Environment to live, work, play, learn, and thrive		
Name and description of metric	*How scores are assigned*	*What this metric can be used to calculate/estimate*
3.4 – Impacts of Vehicle Delay This metric utilized quantitative assessment of travel demand model outputs to estimate vehicle delay from volume/capacity ratios. Change in delay by implementing the candidate project was calculated from the 'trend' scenario.	1 - adds delay to congested corridor (2010 LOS E or F) 2 – adds delay 3 - neutral 4 – decreases delay 5 – decreases delay to congested corridor	Reduction in fuel consumption and emissions associated with idling (see Metric 1.2).
3.5 – Impacts of Vehicle Miles Traveled Using output from the travel demand model, the percent change in Vehicle Miles Traveled (VMT) was determined from the trend model to determine the ability to reduce trips.	1 - worst performing scenario 3 - mid-range scenario 5 - best performing	Estimated carbon footprint and air quality impacts. Based on EPA data, 349 lb of CO_2 are emitted annually per VMT.
3.6 - Impervious Surfaces This metric is used primarily for street projects and assesses the estimated impervious surface area of the traveled roadway for a project relative to the project street's current condition. Area is estimated by multiplying a total number of travel lanes by an assumed average lane width and the overall project length.	1 - more asphalt 2 – more asphalt, 2010 congested corridor 3 - no more asphalt 5 - less asphalt	Estimated impacts to stormwater collection and treatment systems. Based on Pittsburgh's annual rainfall (in inches), each square foot of impervious surface requires the treatment of X gallons of water. Depending on the treatment method, this translates to energy consumption, land consumption, and/or additional costs. It can also be used to estimate estimated changes to urban heat island effect. Impervious surfaces also contribute to the urban heat island effect and building energy usage, with an estimated 1.6% increase in building energy consumption for every degree increase in ambient temperature.

GOAL 4: prioritize investments that support community and Strengthen Neighborhoods		
Name and description of metric	*How scores are assigned*	*What this metric can be used to calculate/estimate*
4.1 - Appropriateness to Context Appropriateness to Context refers to how a proposed facility relates to current and future surrounding land use. This metric was determined through qualitative analysis using GIS spatial maps and prior knowledge of Pittsburgh's neighborhoods.	1 – destructive 2 – unsupportive 3 – neutral 4 – consistent 5 - improves	
4.2 - Consistency with Neighborhood Plans Through GIS, and the inventory of previous plans and studies, an evaluation was conducted to determine consistency of each candidate project with the studies' land use and density recommendations.	If a project originated in a previous plan or study or fit within the currently-planned land use (e.g. a streetscape project adding on-street parking in an existing neighborhood commercial district): 1 - counter to plans 3 - no clear relationship 5 - supportive of plans	
4.3 - Contribution to Complete Streets The existence of non single occupancy vehicle modes, including bicycle, transit and pedestrian components was seen as an important candidate project element.	If a project included a reduction of actual speeds, or the presence of bike lanes was identified the project received a 1. All other projects received a 0. Due to no availability of sidewalk data, this component of streets could not be measured. 1- increases vehicle speed and discourages non-SOV modes 2 – discourages non-SOV modes 3 - no change 4 - improves access for one mode 5 – improves 2 + modes	

GOAL 4: prioritize investments that support community and Strengthen Neighborhoods		
Name and description of metric	*How scores are assigned*	*What this metric can be used to calculate/estimate*
4.4 - Quality of Public Realm: Street Character A metric to identify projects that improve or create public space and/or promote the vitality of an activity center based on a review of land uses. This metric uses a ratio of proposed street width to average building height. This is intended to identify where wider roads in less intense land uses are likely to create barriers to the community or be seen as inconsistent with neighborhood character.	Measures the ratio of average building height to traveled-way width and its match to context. 1 - ratio changed to be greatly out of character 2 - changed to somewhat out of character 3- no change 4 - change improves ratio 5 - greatly improves	
4.5 - Quality of Public Realm: Landscape/Streetscape Addition This metric assesses the amount of street tree coverage added and can be used to estimate increases in canopy, increases in length of buffered pedestrian walkways and potential air quality contribution.	1 - removes greenspace when design guide says it should add 2- removes green space 3 - neither adds nor removes 5 - adds greenspace	Air quality improvement and urban heat island reduction effects from increased tree canopy; stormwater collection and reduced impacts to stormwater system. One street tree can intercept approximately 1,400 gallons of stormwater per year.
4.6 - Community Preference Community Preference was a qualitative assessment of projects that have been openly opposed or supported by the public either via project specific venues (i.e. workshops or public meetings) and /or City council meetings.	1 - strong opposition 2 - some opposition 3- little indication 4 - generally supported 5- greatly supported	
4.7 - Parks and Community Facilities Accessibility In the theme to improve connections, candidate projects received preference if they provided direct access to community facilities through non single occupancy vehicles.	Candidate projects that included a bicycle or pedestrian element within ¼ mile of a community facility : 1 - removes bike and ped 2 - removes bike or ped 3 – neutral 4 adds one 5 - adds 2	

GOAL 5: Provide Connections to Natural and Cultural Resources		
Name and description of metric	*How scores are assigned*	*What this metric can be used to calculate/estimate*
5.1 – River Access Projects that provide either low-speed vehicular access or active mode access to riverfront area	1 – removes access 3 – not related to rivers 5 – adds access	
5.2 – Connectivity to Defined Cultural District Projects that improve access to cultural districts via any mode	1 - damages access 3 – neutral 4 - somewhat improves 5 - greatly improves	
5.3 – Access to Open Space Connectivity between existing neighborhoods and either current or proposed open space	1 - large per mile cost 3 – average 5 – low per/mile cost or intersection project	