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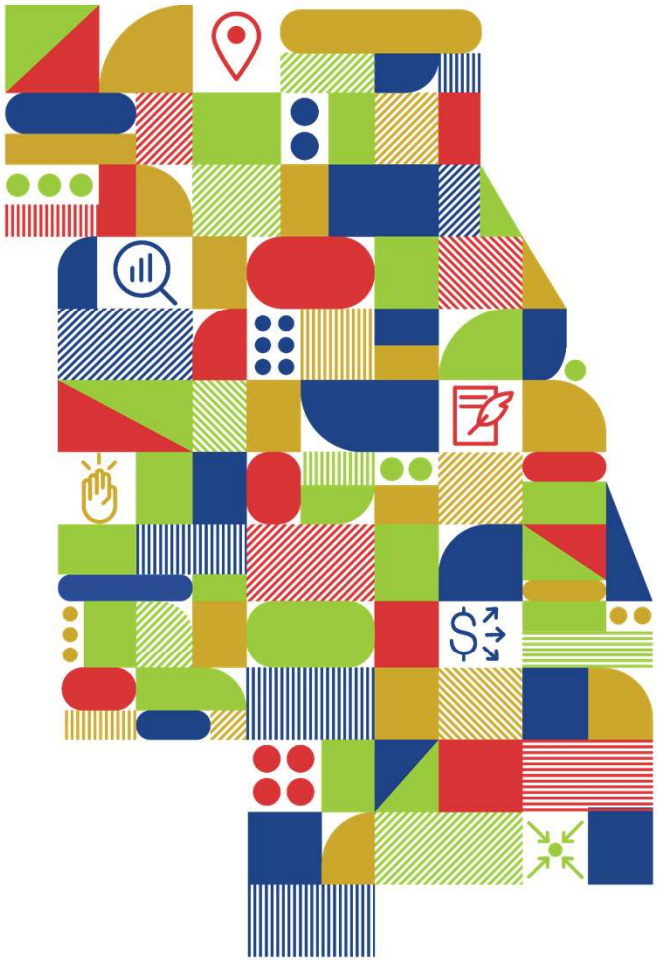
Transit and Bike/Ped Scoring



July 16, 2020

Overview

Review existing transportation impact scoring: bus speed, transit stations

Staff proposal for scoring new bike/ped project categories

Review complete streets planning factor scoring methodology

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Bus Speed Improvements

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Current methodology

Existing Condition

Current on-time performance of bus routes being improved (50%)

Difference between bus travel time and auto travel time on the road(s) being improved (50%)

Improvement (cost effectiveness of)

Improvement to on-time performance (50%)

Change in the bus-auto travel time differential (50%)

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Proposed methodology changes

No changes proposed

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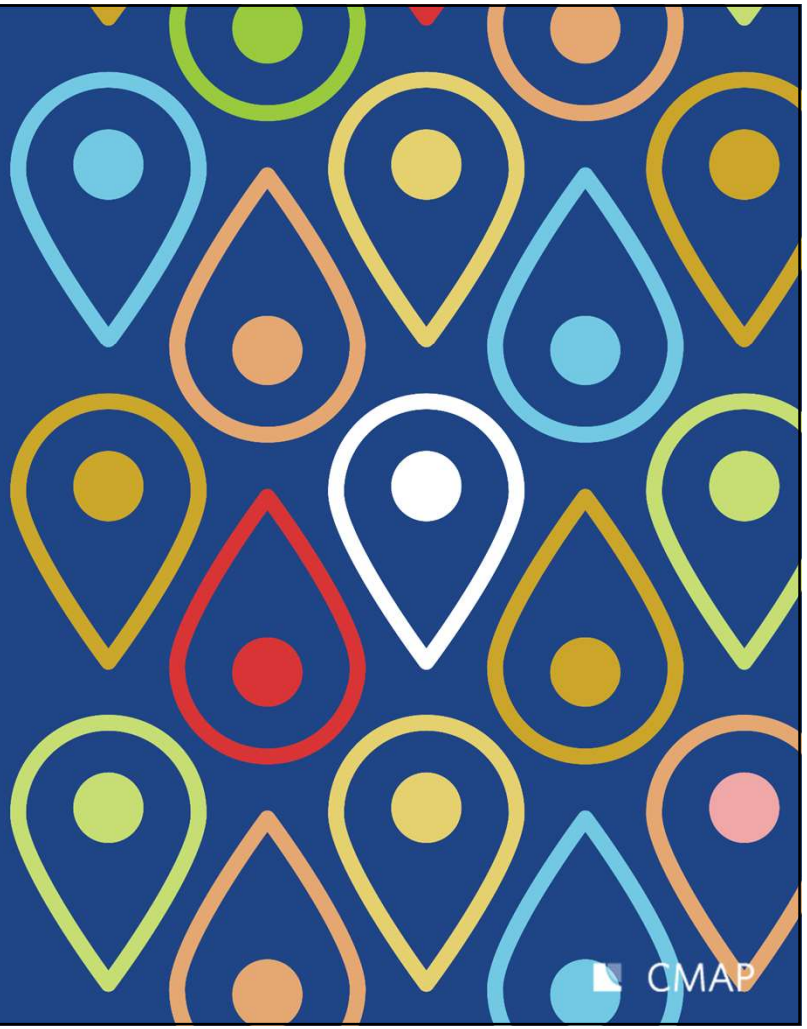
Transit Station projects



Current methodology

Existing Condition

Cost-weighted average TERM condition rating of station components, scaled to 20 pts

For station reconstructions that increase passenger area: TERM score, scaled to 15 pts; extent of existing capacity constraint, scaled to 5 pts

Improvement (cost effectiveness of)

Difference in cost-weighted average TERM condition rating before and after the project

For station reconstructions that increase passenger area, difference in TERM score, scaled to 15 pts; extent that the project addresses capacity constraint, scaled to 5 pts

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Proposed methodology changes

- Remove passenger capacity from the scoring
- Add bicycle/pedestrian access to stations as a component of the scoring
- Include bus terminal/transfer points and certain park-n-ride lots served by express buses as “stations”

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Proposed existing condition score

For reconstruction/rehab of station only:

Cost-weighted average TERM rating, scaled to 20 pts (no change)

For bike/ped access to station only:

Percent of roads in station area* with no sidewalk, scaled to 20 pts

For projects including both station and access:

Factors calculated as above; Both factors are worth 50% of the score

*within ½ mile of station

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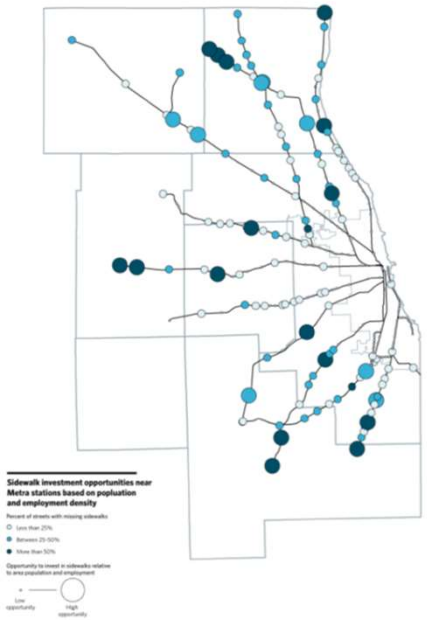
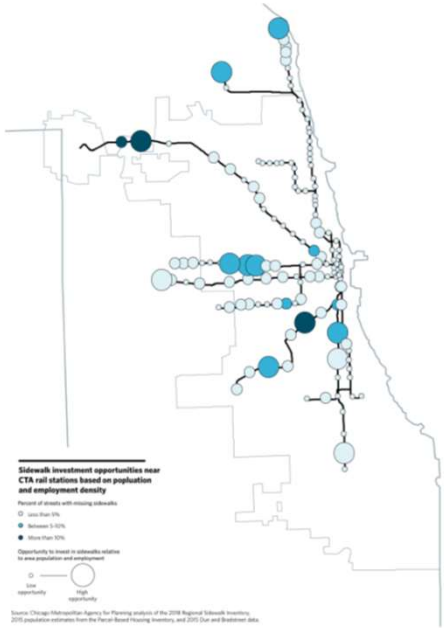
Transit station sidewalk analysis





CMAP staff will also analyze Pace bus terminals, transportation centers, park-n-ride lots, and PULSE station locations prior to the 2021 call for projects.

Source: CMAP analysis of the 2018 Regional Sidewalk Inventory

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Station data

Station name	Line	Road with no sidewalk (feet)	Road with sidewalks on one or more sides (feet)	Percent of roads with no sidewalk	Percent of Roads with sidewalk on one or more sides	Estimated population and employment	Opportunity to build sidewalks	County
La Fox	UP-W	11,623	-	100.00%	0.00%	less than 250	High	Kane
University Park	ME	14,875	614	96.04%	3.96%	less than 250	High	Will
Palos Park	SWS	53,364	6,586	89.01%	10.99%	4,000	High	Cook
Ingleside	MD-N	33,634	6,824	83.13%	16.87%	1,750	High	Lake
Medinah	MD-W	28,196	5,791	82.96%	17.04%	1,250	High	DuPage
Long Lake	MD-N	31,800	8,051	79.80%	20.20%	1,500	High	Lake

Source: CMAP analysis of the 2018 Regional Sidewalk Inventory (cmap.is/SidewalksTransit)

Proposed improvement score
(cost-effectiveness of)

For reconstruction/rehab of station only:

Difference in cost-weighted average TERM rating of station components before and after the project (no change)

For bike/ped access to station only:

% of new plus improved sidewalk (linear ft) in station area

For projects including both scope elements:

Factors calculated as above; Both factors are worth 50% of the score

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Station data

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Source: CMAP analysis of the 2018 Regional Sidewalk Inventory (cmap.is/SidewalksTransit)

Jobs + households score

Calculated based on the travel shed of the station (no change)

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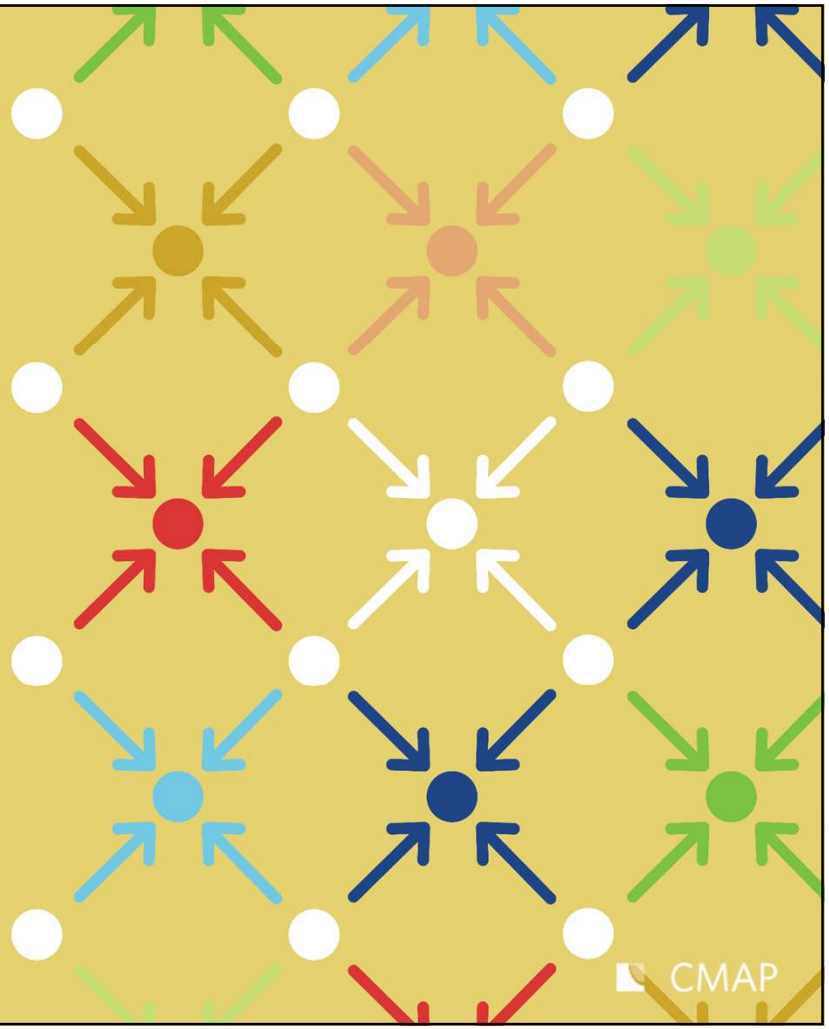
Bicycle and Pedestrian Barrier Elimination



Proposed eligible projects

Projects that remove or reduce a significant physical barrier to bicycle/pedestrian movement

Barriers may be:

- Water features
- Railroads
- Roads (physically divided and/or unsafe to cross)

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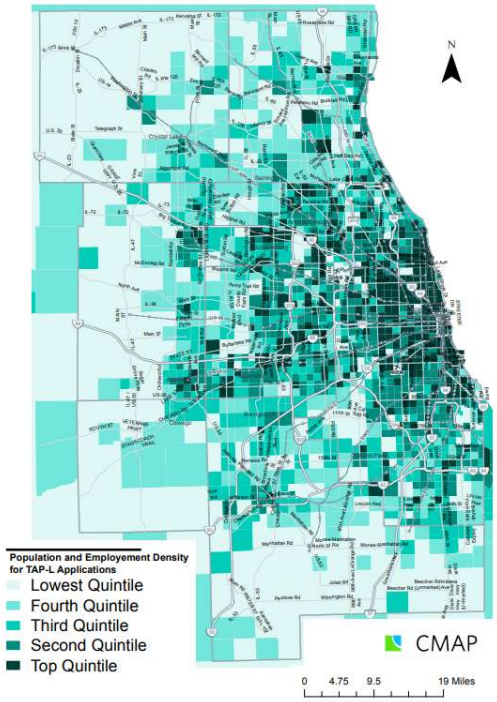
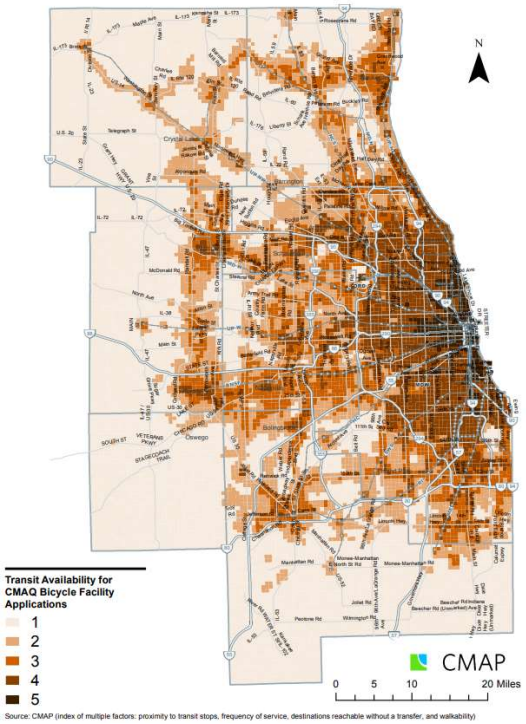
Proposed existing condition score

Barrier Type	Route Characteristics (50%)		Market for Facility (25%)	Connectivity (25%)
Railroad	Number of daily freight, commuter, and passenger trains on line(s) being crossed	Proximity to rail operations bottlenecks (yard, rail-rail at grade crossings, etc.)	Population and employment density and transit availability index in the area served by the facility	Degree to which project completes the Regional Greenways and Trails Plan (RGTP)
Roadway	Level of traffic stress on facility being crossed			
Water feature	Distance to nearest alternate crossing (with bike/ped infrastructure)			

Market for facility (all barriers)

Population and employment density and transit availability in the area served by the facility are used to evaluate anticipated usage





Market for facility (all barriers)

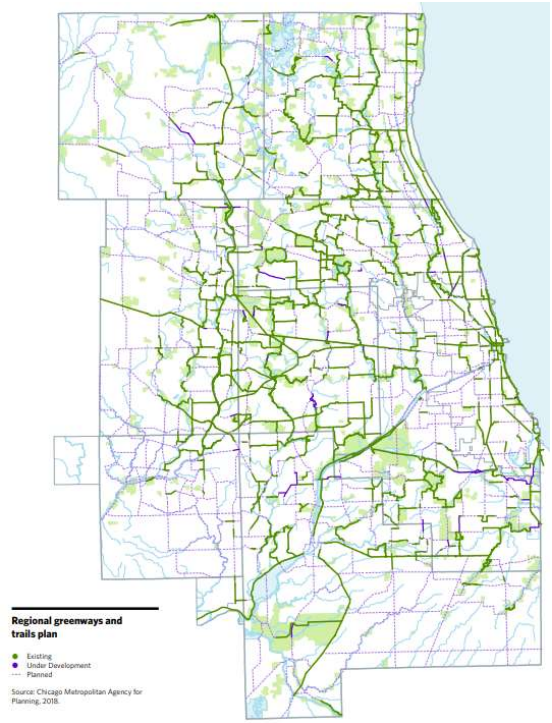
Sum of population and employment density points and transit availability index points

Pop/Employment Quintile	Points
Top quintile of region	2.5
Second quintile	2
Third quintile	1.5
Fourth quintile	1
Lowest quintile	0.5

Transit Availability Index	Points
5	2.5
4	2
3	1.5
2	1
1	0.5

RGTP connectivity (all barriers)

Description	Connectivity Points
Connects two existing Regional Greenways & Trails Plan sections	5
Extends an existing regional trail	4
Builds a new isolated section of a planned regional trail	3
Builds a new facility that intersects an existing regional trail	2
Removes bike/ped barrier at location not included in the RGTP	1



Route characteristics (rail barriers)

Average number of daily trains on the line(s) crossed

Quintile	Points
Top quintile of region (__ to __ daily trains)	5
Second quintile (__ to __ daily trains)	4
Third quintile (__ to __ daily trains)	3
Fourth quintile (__ to __ daily trains)	2
Lowest quintile (__ to __ daily trains)	1

Proximity to relevant rail operations bottlenecks (yard, rail-rail at grade crossings, etc.)

Quintile	Points
Top quintile of region (__ to __ miles)	5
Second quintile (__ to __ miles)	4
Third quintile (__ to __ miles)	3
Fourth quintile (__ to __ miles)	2
Lowest quintile (__ to __ miles)	1

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Route characteristics (road barriers)

Level of Traffic Stress score on the facility being crossed

- Scores range from 1.0 to 4.995 based on physical and operational characteristics of the roadway links and traffic volume

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Route characteristics (water barriers)

Distance to nearest alternate crossing (with bike/ped infrastructure)

Distance	Points
> 2.5 miles	10
> 1 mi – 2.5 mi	7.5
> 0.5 mi – 1 mi	5
> 0.25 mi – 0.5 mi	2.5
0.25 mi or less	0

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Proposed improvement score

Cost effectiveness of change in route characteristics

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Proposed Jobs + households score

Travel sheds will be defined using data from the Bicycle Switching Model used for CMAQ and TAP project evaluations

Jobs and households within the travel shed will be assigned in the same manner as all other project types

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Proposed Planning Factors

Inclusive growth

Demographics of project area (1 mi buffer)

Green infrastructure

Policy & Elements

Complete Streets

Policy only

Current factors

Project types	Planning factors				
	green infrastructure	freight movement	inclusive growth	complete streets	transit supportive density
Highway/rail grade crossing improvements	5	-	10	10	-
Truck route improvements	5	-	10	10	-
Road expansions	5	5	10	5	-
Road reconstructions	5	5	10	5	-
Bridge rehab/ reconstructions	-	5	10	10	-
Corridor-level or small area safety improvements	-	5	10	10	-
Transit station rehab/ reconstructions	-	-	10	5	10
Bus speed/reliability improvements	-	-	10	5	10
	Maximum: 25				

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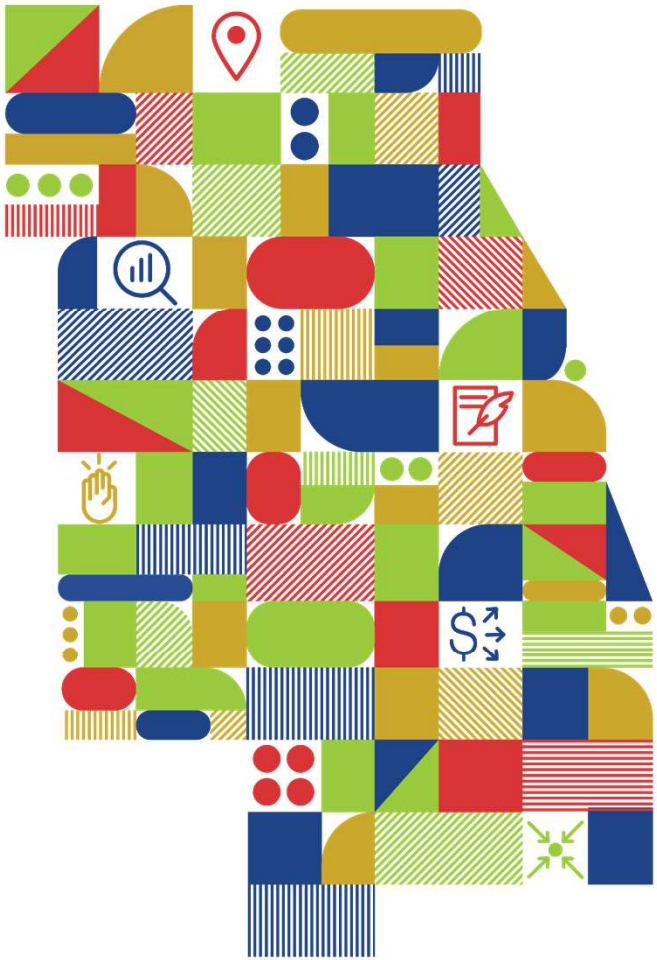
Complete Streets Planning Factor

July 16, 2020



Current scoring

A project receives half of the points in this category if the project sponsor has adopted complete streets policies, and the other half if the project contains complete streets elements or has documented an exception to complete streets policies during phase 1 or phase 2 engineering.

Transit station, bus speed improvement, road reconstruction, and road expansion projects can receive a total of 5 points in this category (2.5 from policies, 2.5 from project elements).

Grade crossings, bridge reconstructions, safety projects, and truck routes can receive a maximum of 10 points (5 from policies, 5 from project elements).

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Comments received

All applicants should be required to include context appropriate complete streets facilities in their projects.

The proposed complete streets elements should be confirmed to be feasible and should not have associated costs (land acquisition, utilities, etc.) or other issues that will result in the elimination of these elements from final design.

Half of the potential points for this category may be awarded for a project in a community having a complete streets policy in place, even if the project itself does not include any complete streets elements. This approach will not actively advance implementation of on-the-ground improvements. All points should be linked to having complete streets elements.

Replacing complete streets elements “in-kind” should be scored as including elements.

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Proposed changes

Change from equal weight for policy and elements to 40% of points for policy and 60% of points for elements

Elements points are the sum of points for individual elements (sidewalks, on-street bike, multi-use path/trail)

Complete streets elements

Elements included in project*	Points
Sidewalks	+ 2 pts per side
Marked/striped bike lane	+ 1 pt per side
Buffered/protected bike lane	+ 3 pts per side
Multi-use path/trail (either side)	+ 4 pts

Maximum points = 14
(scale to max. per methodology)

*Added, replaced, improved, or existing

Example

project results in:
sidewalk on one side and
multi-use path on one side

score is:
2 + 4 = 6

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