Baltimore Complete Streets

What is Complete Streets?

Restoring safe conditions for all users

- In mid-20th century, many cities, including Baltimore, remade their streets to better accommodate cars
- Changes made pedestrian, bike, or transit traffic unsafe or more difficult
- 1955: Henry Barnes submitted Recommended Capital Improvement Program of 550 projects in Baltimore:
  - Removed pedestrian infrastructure
  - Widened lanes and turning radii
  - Streets much more dangerous for vulnerable users

What is Complete Streets?

Restoring safe conditions for all users

- “I [don’t] mind [Baltimore’s streetcars]...except for the fact that they run on the streets.”
  - Henry Barnes
- “The right to access every building in the city by private motorcar, in an age when everyone owns such a vehicle, is actually the right to destroy the city.”
  - Lewis Mumford, 1961

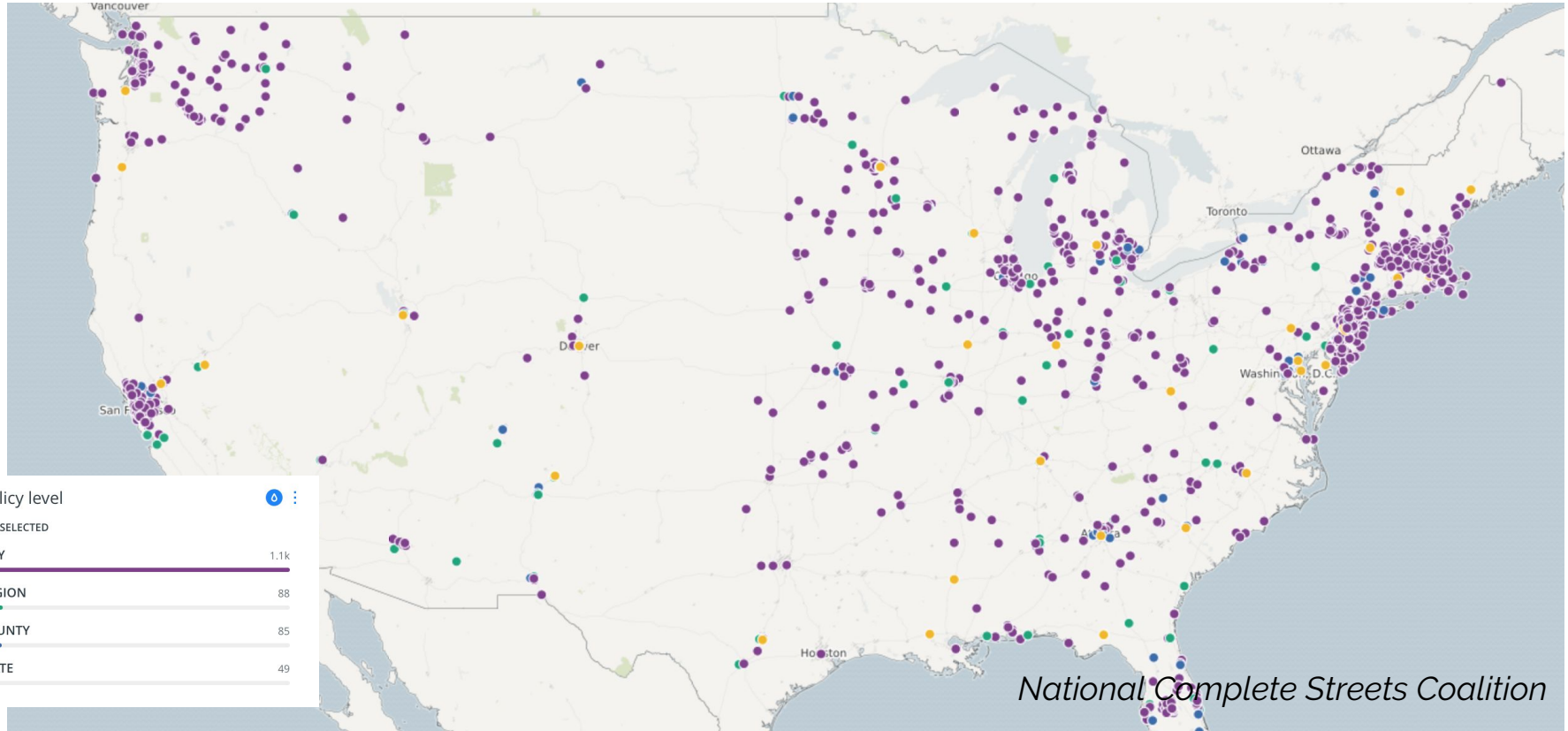
What is Complete Streets?

Restoring safe conditions for all users

- 1971: Portland law is considered first Complete Streets law
- 2003: A coalition coined the term “Complete Streets”
- 2005: National Complete Streets Coalition formed
- Early comprehensive Complete Streets design manuals:
  - Portland (1998), Louisville (2007), Charlotte (2007), Minneapolis (2008), NYC (2009), New Haven (2010), San Francisco (2011), Chicago (2013), Atlanta (2013)
- By 2012 there were 500 Complete Streets policies, today there are more than 1,200

Why do we need Complete Streets?

Cities across the country

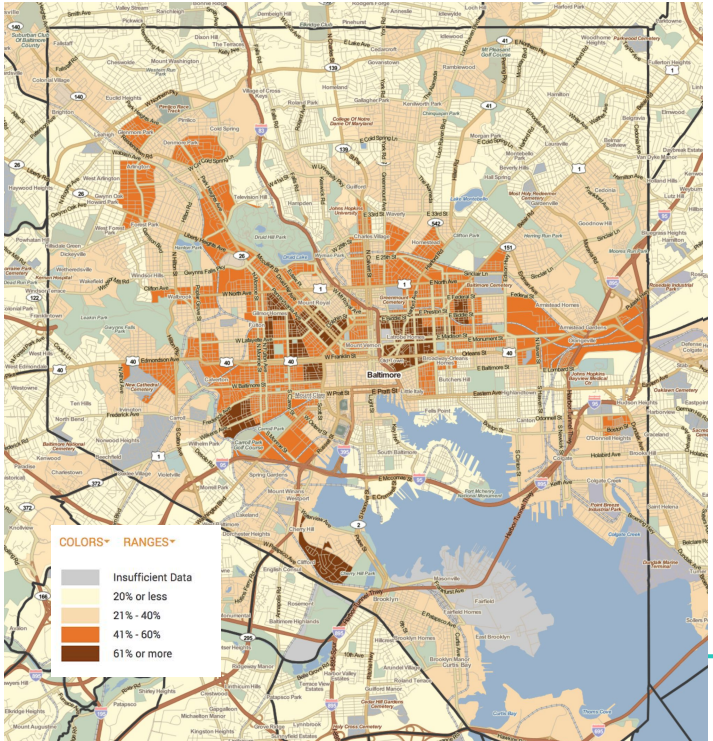


National Complete Streets Coalition

Why do we need Complete Streets?

Equity

% of Houses Without Access to a Car



33%
of Baltimore households
lack access to a car

As high as
80%
of Baltimore households
in historically red-lined communities
lack access to a car

Why do we need Complete Streets?

Equity

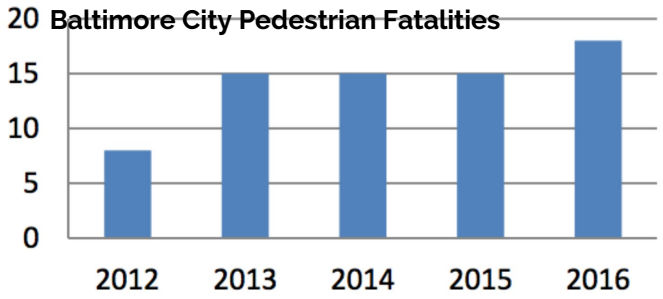
- ➔ CMTA's Report Card gives transit a D in our region
- ➔ Only 11% of regional jobs accessible within 1 hour on public transit
- ➔ Rate Your Ride reports 42% of transit vehicles skipped a stop or were late
- ➔ The majority of households in the region spend more than 45% of their income on transportation and housing

Why do we need Complete Streets?

Crash Safety

Fatal, injury and property damage crashes in Baltimore City are increasing.

Category	2012 [1]	2013 [1]	2014 [1]	2015 [2]	2016 [2]	5 Year Average	% of Total Crashes
Total of All Fatal Crashes	28	31	29	40	46	35	0.2
Injury Crashes	4,814	4,602	4,709	4761	5980	4973	22.0
Property Damage Crashes	15,900	16,397	16,877	18,500	20,455	17626	77.9
Total Crashes	20742	21030	21615	23301	26481	22634	100.00
Total of All Fatalities	28	31	29	43	53		
Total Number Injured	7408	7055	7415	7677	9645		



Baltimore's crash rate is

370%

the statewide rate
and is comparable to Los Angeles

Baltimore's traffic fatality rate is

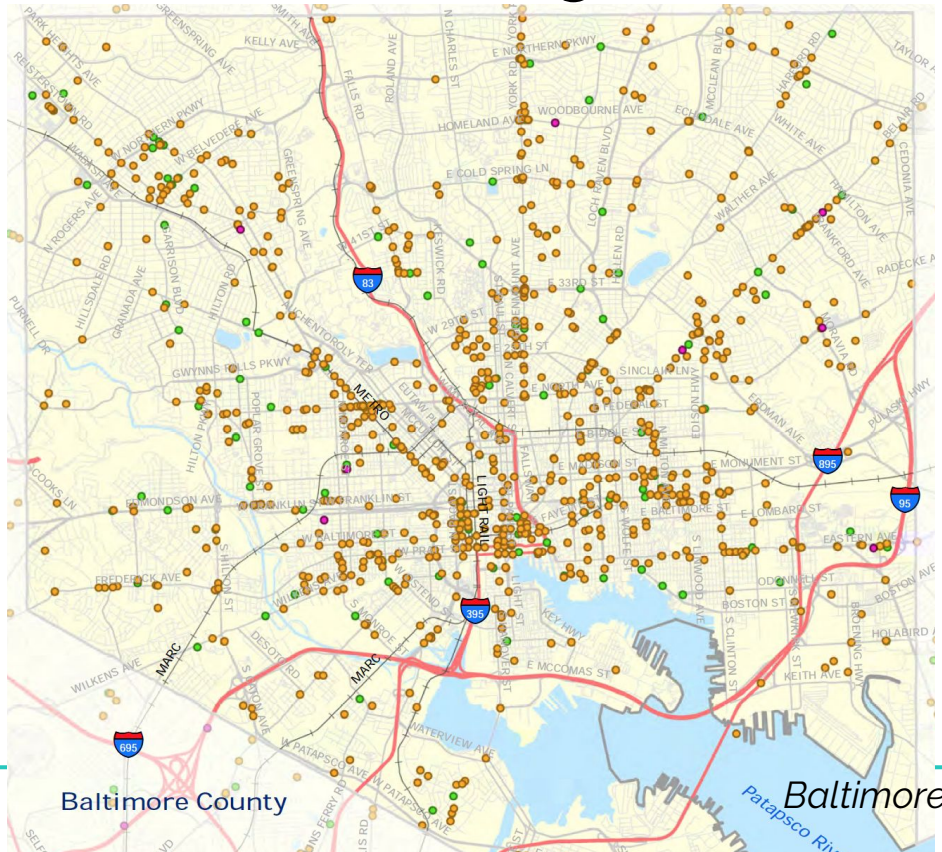
40% higher

than New York City

Charts: 2017 BCDOT Complete Streets Report

Why do we need Complete Streets?

Pedestrian Crashes 2015



Why do we need Complete Streets?

Equity

Black bicyclists are
30% more likely to be killed
than white bicyclists

Black pedestrians are
60% more likely to be killed
than white pedestrians

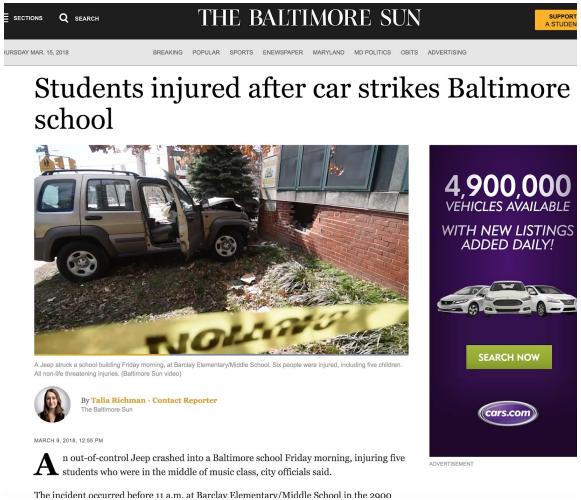
Latino bicyclists are
23% more likely to be killed
than white bicyclists

Latino pedestrians are
43% more likely to be killed
than white pedestrians

League of American Bicyclists

Why do we need Complete Streets?

Crashes in the news



THE BALTIMORE SUN

Students injured after car strikes Baltimore school

A Jeep struck a school building Friday morning, at Barclay Elementary/Middle School. Six people were injured, including five children. All non-life threatening injuries. (Baltimore Sun video)

By Talia Richman - Contact Reporter
The Baltimore Sun

MARCH 9, 2018, 12:66 PM

An out-of-control Jeep crashed into a Baltimore school Friday morning, injuring five students who were in the middle of music class, city officials said.

The incident occurred before 11 a.m. at Barclay Elementary/Middle School in the 2000

THE BALTIMORE SUN

Police: Baltimore City DPW employee charged in fatal hit-and-run case

The Baltimore Sun

AUGUST 20, 2016, 11:02 AM

A Baltimore City Department of Public Works employee has been charged in a fatal hit-and-run crash that occurred Monday, police said.

Angelo Laprade, of New Freedom, Pa., was driving a Baltimore DPW vacuum vehicle when he struck and killed a bicyclist at the intersection of Chester Avenue and Chase Street, police said.

Laprade, 36, is charged with failing to return to the scene of an accident involving death, and failing to exhibit his license to police after an accident involving death.

The victim, 54-year-old Ralph Myron Roane, of Dundalk, was struck just before 1:30 p.m. Monday. He was taken to an area hospital where he died.

Preliminarily, police said they believe this accident occurred because of pedestrian error, but the investigation remains open until a total reconstruction of the accident has been completed.

Related

Baltimore homicides map
JUL. 1, 2014

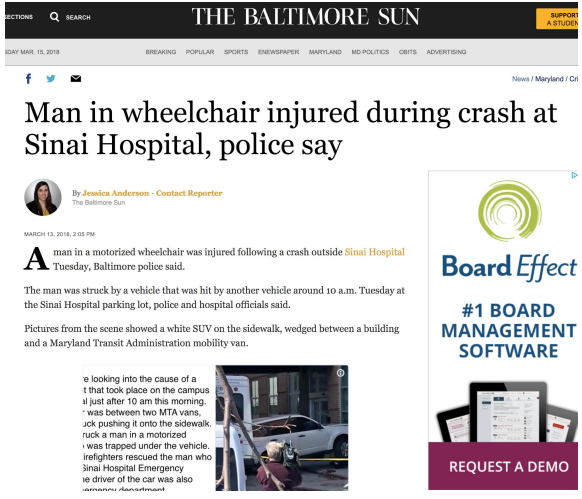
Baltimore district judge charged with neglecting years of paperwork and discourteous conduct
12:45 PM

Store owner near where Baltimore detective Suiter was killed says police seized, damaged surveillance cameras
10:00 AM

See More

From this article

Bicyclist, 52, struck and killed in



THE BALTIMORE SUN

Man in wheelchair injured during crash at Sinai Hospital, police say

By Jessica Anderson - Contact Reporter
The Baltimore Sun

MARCH 13, 2018, 2:05 PM

A man in a motorized wheelchair was injured following a crash outside Sinai Hospital Tuesday, Baltimore police said.

The man was struck by a vehicle that was hit by another vehicle around 10 a.m. Tuesday at the Sinai Hospital parking lot, police and hospital officials said.

Pictures from the scene showed a white SUV on the sidewalk, wedged between a building and a Maryland Transit Administration mobility van.

e looking into the cause of a
t that took place on the campus
l just after 10 am this morning.
was between two MTA vans,
uck pushing it onto the sidewalk.
ruck a man in a motorized
was trapped under the vehicle.
irefighters rescued the man who
Sinai Hospital Emergency
e driver of the car was also

Why do we need Complete Streets?

Public Health

Figure ES-1. Comparison of Asthma Hospitalization Rates in Baltimore City, Maryland, and the United States (2010)

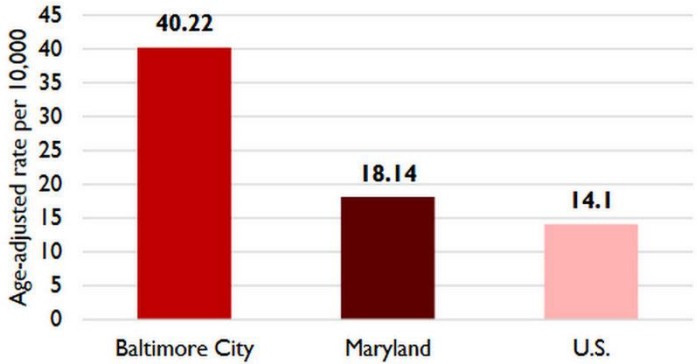


Figure 7. Hourly $PM_{2.5}$ Concentrations from Road Traffic Emissions (Peak Afternoon, Summer)

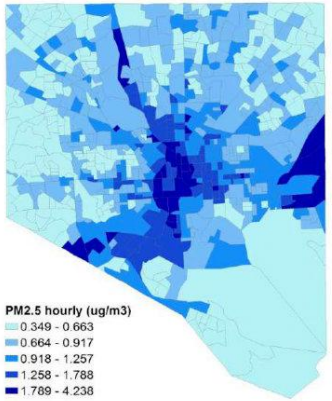
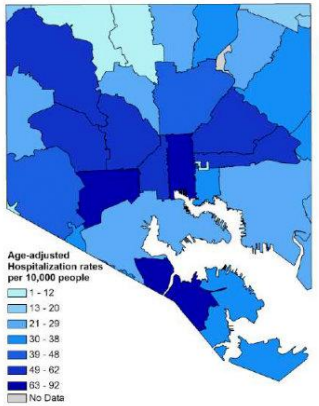


Figure 8. 2011 Asthma Hospital Discharge Rates



Baltimore's childhood asthma rates are far higher than national average.

Baltimore has 200% more particulate matter days than Maryland

All health metrics worse in red-lined communities

Chart and map: Environmental Integrity Project

Why do we need Complete Streets?

Economics: Transportation Costs

$8,000+/year
Avg car ownership

[20% of Baltimore City median household income]

$17,742/space
Avg surface parking space construction

↑ $855 million
Increase in annual discretionary income if all Baltimore households owning cars reduced to one car

Because currently
73% of gas money &
86% of car purchase money
immediately leaves local economy

Car ownership costs based on annual reporting from AAA.
$855M based on cost of car ownership multiplied by the number of multi-car households in Baltimore City.

Why do we need Complete Streets?

Economics: Job Creation

2x

Jobs created in projects including ped + bike infrastructure vs. traditional road projects

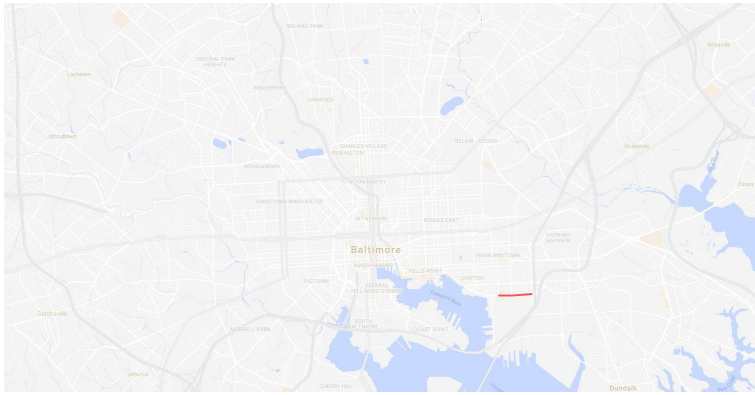
1 mile

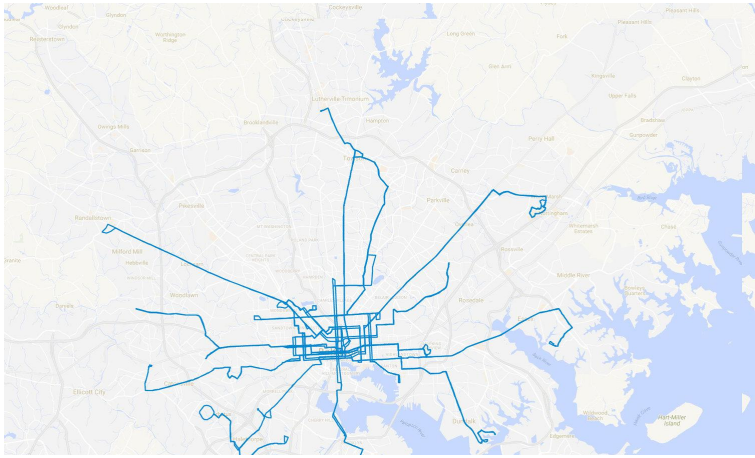
Road widening cost

Boston St in Southeast Transportation Vision

=

Bus Priority Lanes For entire CityLink Network





Why do we need Complete Streets?

Economic Development + Revitalization

The Cleveland HealthLine, a $200m BRT project that reallocated roadway space from personal automobiles to bus rapid transit, delivered more than $6.3 billion in economic development along the Euclid corridor, $114 gained for every dollar spent.

Greater Cleveland Regional Transit Authority

Toronto's King Street Pilot, which converted a car-friendly main street to streetcar, bike, and ped use only, showed an immediate 24% travel savings time for transit commuters, increased ridership to over 65,000 daily streetcar riders, had no negative impact on streetfront retail, and only 1 min. of travel delay in rush hour

Toronto Transit Commission

Customers who arrive at retail stores by bike and foot spend the same amount per month as comparable people who arrive by car.

Clifton, K., et al., 2012 - Consumer Behavior and Travel Mode Choices

Existing Complete Streets Resolution

- 09-0433 Streets and Transportation Projects - Complete Streets: Resolution of the Mayor and City Council Community Development Subcommittee *(Passed November 2010)*
- Complete streets to be applied to the **planning, design, and construction** of **all** new City transportation improvement projects
- Used best practices at the time:
  - Applied to **all** projects
  - Applied to **planning**, **design**, and **construction**
  - Requires collecting and reporting of certain data
- Considered unenforceable because not Ordinance. **Result: ignored**

The New Bill

- ➔ Mandates specific engineering standards, such as design speed and lane width, that is proven to improve safety.
- ➔ Mandates interagency collaboration through the creation of a Complete Streets Policy Manual, incorporating safe streets design into all capital projects and agency policies.
- ➔ Creates policies and reporting metrics around equity. Mandates DOT create transparent project timelines, improved outreach strategies, and justification for projects.

The New Bill

- ➔ In developing the bill, we looked at national best practices, from the National Complete Streets Coalition and cities across the country
- ➔ In the bill overview that follows we note:
  - * Best practices
  - ✓ Compromises we've made with DOT

Bill Goals

Baltimore Complete Streets Bill	National Complete Streets Coalition Best Practices
Ensure safety & convenience for all users Connected facilities	✓ Policy must mention complete, connected networks accommodating all modes
Promotes biking, walking, public transit	✓ Policy must specify modes, two of which must be biking and walking
Ensures equity	✓ Policy language should prioritize vulnerable users or neighborhoods with histories of systematic disinvestment or underinvestment.

✓ Best practice ✱ Compromise with DOT

Bill Components

Definitions + Applicability

Baltimore Complete Streets Bill	National Complete Streets Coalition Best Practices
Must/shall = required	✓ Policies should be clear, using shall or must language
Applicable to planning, programming, design, acquisition of land, construction, construction engineering, reconstruction, rehabilitation, resurfacing, retrofit, operation.	✓ Policy should have a strong commitment to all transportation projects in all phases and specifically. Policy should require maintenance projects and ongoing operations, such as resurfacing, repaving, restriping, rehabilitation, or other types of changes to the transportation system to account for the needs of all modes of transportation and all users of the road network.
Exceptions: ordinary maintenance, preexisting projects, limited access roads (interstates, freeways, etc)	✓ Exceptions should be clear. Accommodation is not necessary on corridors where specific uses are prohibited, such as interstate freeways.

✓ Best practice ✱ Compromise with DOT

Bill Components

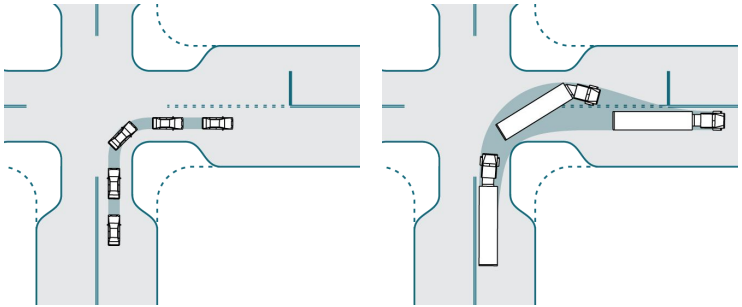
Coordinating Council

Baltimore Complete Streets Bill	National Complete Streets Coalition Best Practices
DOT, Planning, DPW, Health, Rec & Parks, Sustainability, Parking Authority, MTA. (DOT Director is Chair) • Identifies and reviews projects, promotes interagency cooperation, coordinates community engagement • DOT Director has ultimate discretion	✓ Policy should specify a requirement for interagency coordination between various agencies such as public health, housing, planning, engineering, transportation, public works, city council, and/or mayor or executive office.

✓ Best practice ✱ Compromise with DOT

Bill Components

Design Standards

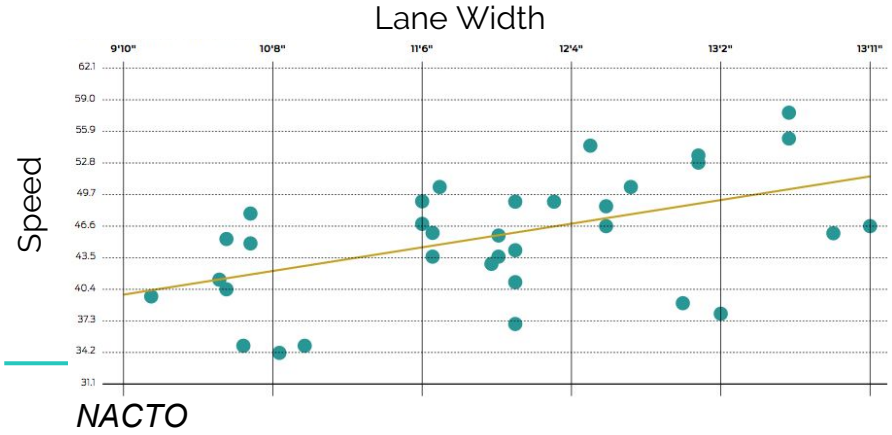
Baltimore Complete Streets Bill	NACTO Urban Street Design Guide
Design vehicle	✓ Language specifies using NACTO guide word-for-word
Design speed must not be greater than posted speed 	✓ Use design criteria that are at or below the target speed of a given street. The use of higher speeds should be reserved for limited access freeways and highways and is inappropriate on urban streets, including urban arterials. Bring the design speed in line with the target speed by implementing measures to reduce and stabilize operating speeds as appropriate.

✓ Best practice ✱ Compromise with DOT

Bill Components

Design Standards: Lane Widths

Baltimore Complete Streets Bill	FHWA	NACTO
9 feet unless collector/arterial/bus/truck 10 foot for collector/arterial 11 foot one lane each direction for bus/truck.	✓ Local - 9-12 feet Arterial - 10-12 feet Collector - 10-12 feet	✓ Lanes greater than 3m (9.8ft) are discouraged as they enable unintended speeding and double parking, and consume valuable right-of-way at the expense of other modes. In multi-lane roadways where transit or freight vehicles are present, one wider travel lane may be provided. The wider lane should be the outside lane, curbside or next to parking. Inside lanes should continue to be designed at the minimum possible width at 3m (9.8ft) or less.



NACTO

✓ Best practice ✱ Compromise with DOT

Bill Components

Project Prioritization & Delivery

Baltimore Complete Streets Bill		Chicago
Gives clear project lifecycle to public	✓	

FIGURE 40 - COMPLETE STREETS AND SUSTAINABILITY PROJECT DELIVERY: Steps by Project Type, Updated 2014

	Stage 1: Project		Stage 2: Scoping												
	Goal: Identify/ promote Complete Streets in projects		Goal: Address all needs identified during scoping												
CDOT PROJECT TYPES (select one)	1.1 Identify Project Initiation	1.2 Identify Project Budget	2.1 Establish Project Goals & Requirements	2.2 Research	2.2.1 Examine Crash Report Summaries	2.2.2 Examine Relevant Planned/Programmed Roadway Projects	2.2.3 Examine Neighborhood and Modal Plans	2.2.4 Examine Notable Developments In or Near Project Ar	2.2.5 Review Prior Transportation & Traffic Studies	2.2.6 Examine Existing Sustainability Data Sets	2.2.7 Summarize Prior Public Engagement	2.2.8 Update Budget	2.3 Site Visits	2.3.1 Initial Observation	2.3.2 Observation checklist
ADA ramp improvements	x	x	x			x						x		x	
Alley improvements	x	x	x			x		o	o	x		x		x	x
Arterial resurfacing	x	x	x		x	x	o	x	x	x		x		x	x
Bike facility projects	x	x	x		x	x	x	x	x	x	x	x		x	x
Bike Stations	x	x	x			x	x	x		x		x		x	
Bridge repair	x	x	x			x		x	x	x		x		x	x
Bridge Replacement/New	x	x	x		x	x	x	x	x	x	x	x		x	x
Child Safety Zones	x	x	x		x	x	o	x	x			x		x	x
CREATE/rail projects	x	x	x			x	x	x	x	x	x	x		x	x
Landscaped median imprvs	x	x	x		x	x	x	x	x	x	x	x		x	x
Lighting projects	x	x	x				x			x		x		x	
Major Roadway Reconstruction/ Realignment Project	x	x	x		x	x	x	x	x	x	x	x		x	x
Ped safety infrastructure improvements	x	x	x		x	x	x	x	x		x	x		x	x
Placemaking Activities	x	x	x			x	x	x	x		x	x		x	
Red light/Speed cameras	x	x	x		x	x		x	x		x	x		x	x
Riverwalk Projects	x	x	x			x	x	x	x	x	x	x		x	
Sidewalk and miscellaneous concrete projects	x	x	x				x					x		x	
Signage & pavement marking improvements	x	x	x		x	x						x		x	x
Signal modernizations, new signals, signal interconnects	x	x	x		x	x	x	x	x		x	x		x	x
Streetscaping projects	x	x	x		x	x	x	x	x	x	x	x		x	x
Traffic Calming	x	x	x		x	x	x	x	x		x	x		x	x
Transit projects	x	x	x		x	x	x	x	x		x	x		x	x
Tree planting and landscape	x	x	x									x		x	
WPA/industrial streets	x	x	x		x	x	x	x	x		x			x	x

	Stage 2: Scoping (cont.)													Stage 3: Design								
														Goal: Address all objectives identified during scoping								
CDOT PROJECT TYPES (select one)	2.3.3 Building Form and Function	2.3.4 Roadway Form and Function	2.3.5 Typical Sections	2.3.6 Intersection and Mid-block Crossing Worksheets	2.4 Mapping and Analysis	2.4.1 Generate and Analyze Typology Maps	2.4.2 Generate and Analyze Activity Maps	2.4.3 Generate and Analyze Volume Maps	2.4.4 Generate and Analyze Crash Maps	2.4.5 Identify Preliminary Sustainability Strategies	2.4.6 Create Outreach Plan	2.5 Modal Deficiencies & Hierarchy	2.6 Revisit Project Goals and Envionmental Requirements; Formalize Strategies	3.1 Create Design Alternatives	3.1.1 Summarize Project Information from Scoping	3.1.2 Cross Section Development	3.1.3 Perform Sustainability Calculations	3.1.4 Identify Sustainable Features	3.1.5 Initial Public Engagement	3.2 Schematic Design	3.2.1 Analyze Crashes and Design for Safer Streets	3.2.2 Apply Street and Intersection Designs and Policies
ADA ramp improvements										x		x	x		o			x				
Alley improvements							o			x		x	x		x		x	x				
Arterial resurfacing	x	x	x	x		o		o	o	x	x	x	x		x	x	x	x	x		x	x
Bike facility projects	x	x	x	x		o	o	o	x	x	x	x	x		x	x	x	x	x		x	x
Bike Stations	x					x	o			x	x	x	x		o		x	x	x			
Bridge repair								x		x		x	x				x	x				
Bridge Replacement/New	x	x	x	x		x	o	x	x	x	x	x	x		x	x	x	x	x		x	x
Child Safety Zones	o	o	o	x			o		x	x	x	x	x		o	o	x	x	x		x	x
CREATE/rail projects	x	x								x	x	x	x		x	x	x	x	x		x	
Landscaped median imprvs	x	x	x	x		x	o	x	x	x	x	x	x		x	x	x	x	x		x	x
Lighting projects							o	o	o	x							x	x				o
Major Roadway Reconstruction/ Realignment Project	x	x	x	x		x	o	o	x	x	x	x	x		x	x	x	x	x		x	x
Ped safety infrastructure improvements	x	x	x	x		x	o	x	x	x		x	x		x	o	x	x	o		x	x
Placemaking Activities							x			x		x	x		o	o	x	x	o			x
Red light/Speed cameras								x	x	x		x	x					x			x	
Riverwalk Projects	x									x	x	x	x				x	x	x			x
Sidewalk and miscellaneous concrete projects							o			x		x	x				x	x				x
Signage & pavement marking improvements		x		x		o			x	x	x	x	x		x	x		x	x		o	x
Signal modernizations, new signals, signal interconnects	x	x	x	x		x		x	x	x		x	x					x			o	o
Streetscaping projects	x	x	x	x		x	o	x	x	x	x	x	x		x	x	x	x	x		o	x
Traffic Calming	x	x	x	x		o	o	x	x	x	x	x	x		x		x	x	x		o	x
Transit projects	x	x	x	x		x	o	o		x	x	x	x		x	o	x	x	x			x
Tree planting and landscape										x							x	x				
WPA/industrial streets						x				x	x	x	x		x	x	x	x	x			x

KEY: x = required, o = optional, blank = not required

✓ Best practice

* Compromise with DOT

Bill Components

Community Engagement

Baltimore Complete Streets Bill	National Complete Streets Coalition Best Practices
Ensure equity in engagement	* Policy specifically addresses how the jurisdiction will overcome barriers to engagement for underrepresented communities.
Ensure robust public comment period	* Policy should create a community engagement plan with specific strategies for who, when, and how they will approach public engagement in the project selection, design, and implementation process.

✓ Best practice * Compromise with DOT

Bill Components

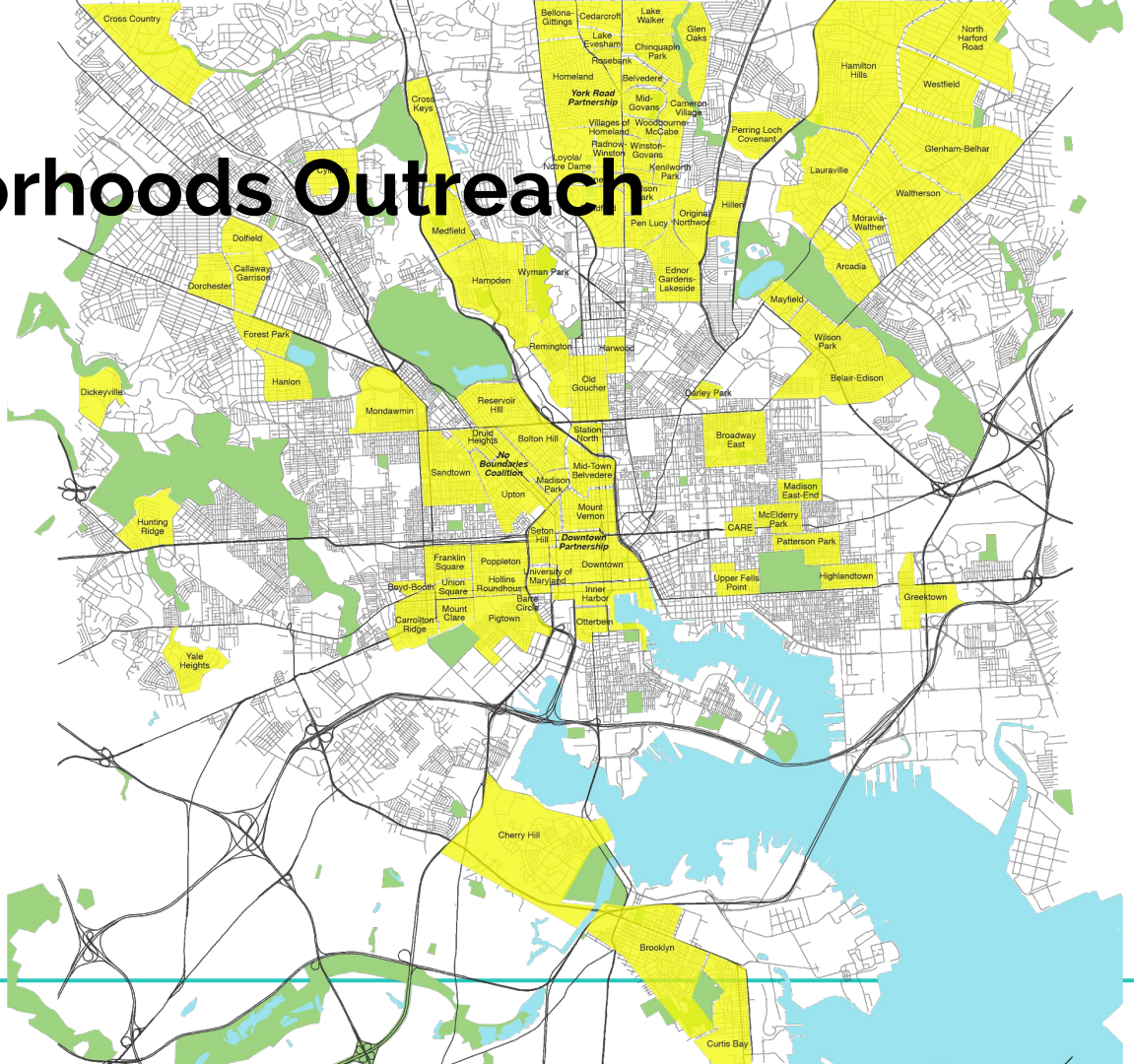
Reporting

Baltimore Complete Streets Bill	National Complete Streets Coalition Best Practices
Robust data to analyze ROI, equity in investment, and movement toward departmental and city goals.	✓ Policy should establish specific performance measures for the implementation process such as tracking how well the public engagement process reaches underrepresented populations or updates to policies and documents. ✓ Policy should specific performance measures under multiple categories such as access, economy, environment, safety, and health. ✓ Policy should embed equity in performance measures by measuring disparities by income/race/vehicle access/language/etc. as relevant to the jurisdiction.

✓ Best practice ✱ Compromise with DOT

Bill Outreach

Neighborhoods Outreach



Bill Outreach

What neighbors are saying

“My wife was hit by a careless driver as she commuted to work....she lived to tell the story..and is still recovering. Please give us the option to commute besides driving. We deserve to have choices and have those choices protected!”
— Vicki, District 7

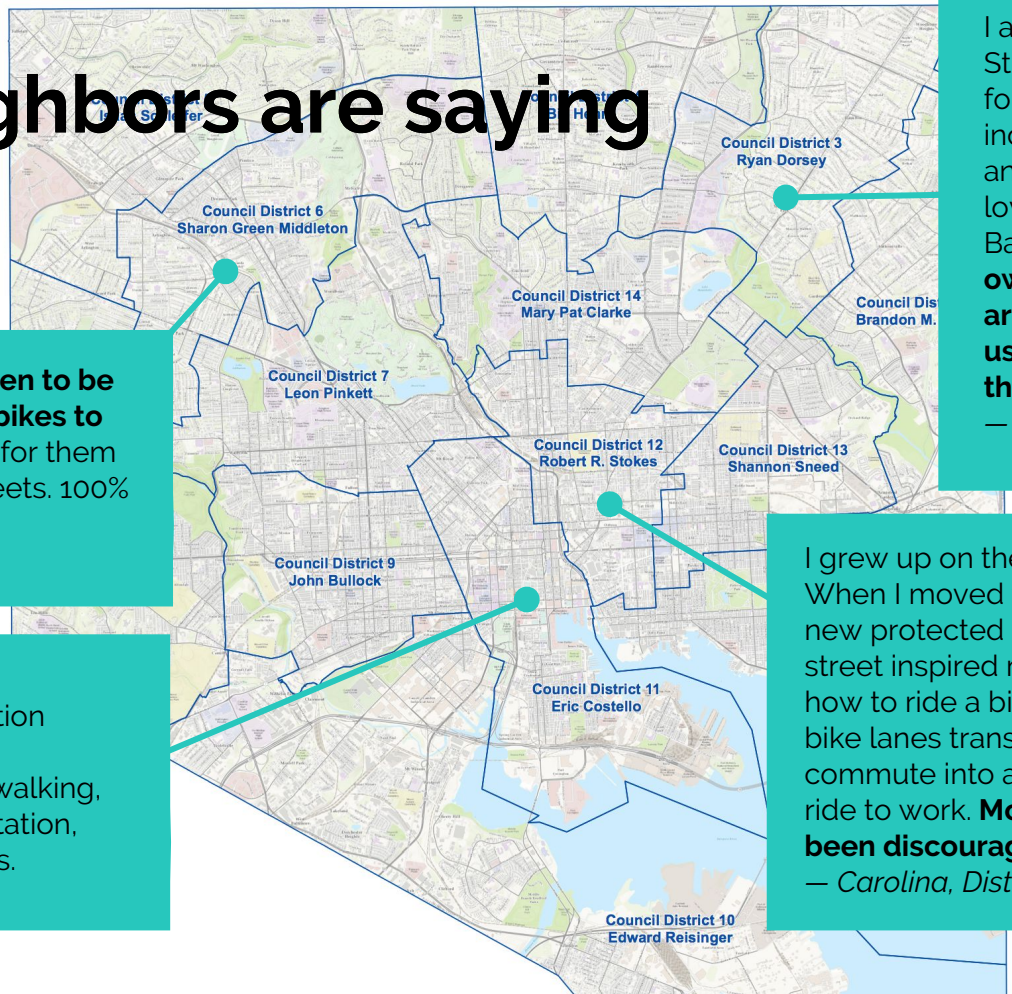
“**Bike lanes, bike sharing and charm city circulator should be extended to those neighborhoods who do not have access to vehicles**. Extending the circulator by just a additional mile could make all the difference.”

— L., District 10

“Evidence from other cities supports the proposition that **designs like those in the Complete Streets plan decrease congestion in the long term and stimulate growth and renewal**, particularly of the neighborhoods that are "in between" popular destinations.”
— Brett, District 14

Bill Outreach

What neighbors are saying



I am also supporting Complete Streets because this type of forward thinking program will increase the quality of my life and the lives of those that I love that live, visit, and work in Baltimore City. **My family owns one car and try to get around as we can by walking, using ride shares, and using the bus and Circulator.**
— Lindsay, District 3

I would love for my children to be able to walk or ride their bikes to school, but it's impossible for them to do that without safe streets. 100% support this ordinance"
— Matthew, District 6

I grew up on the west side of Baltimore. When I moved to Chicago for school, the new protected bike infrastructure on my street inspired me, at the age of 20, to learn how to ride a bike for the first time. These bike lanes transferred my 2-transfer bus commute into an interesting (albeit lengthy) ride to work. **Moving back to Baltimore has been discouraging.**
— Carolina, District 12

It's time to make sure our Department of Transportation **considers all methods of transportation**, including walking, biking and public transportation, when designing our streets.
— Jason, District 11

Bill Outreach

People & Time Invested

50+
Public Meetings

35+
Internal Meetings

400+
Total Hours Invested

15+
Agency Meetings

943
Petition Signers

Bill Outreach

Coalition