PEDESTRIAN & BICYCLIST
FOCUSED APPROACH TO SAFETY

Leap Not Creep

Accelerating Pedestrian and Bicyclists Safety Improvements Confirmation

Tuesday, December 14, 2021

U.S. Department of Transportation
Federal Highway Administration

ZERO IS OUR GOAL
A SAFE SYSTEM IS HOW WE GET THERE

Webinar Logistics

- Please post questions at any time
- We will be saving time at the end of the session for questions and discussion
- Webinar slides and recording will be posted at www.pedbikeinfo.org/webinars

Continuing Education Credits

- Webinar approved for CM credits by AICP
- Certificates of Attendance can be requested following this webinar

Agenda

- Review of Federal Funding (Karen Scurry, FHWA)
- Agency Case Studies:
  - Maine Department of Transportation (Patrick Adams)
  - City of Minneapolis (Matthew Dyrdahl)
  - Washington DC Department of Transportation (Derek Voight)
- Discussion

Webinar Objectives

- Understand challenges and opportunities related to accelerating pedestrian and bicyclist safety projects
- Identify strategies for quick implementation of safety projects using Federal funds
- Learn from transportation agencies about their successes

Panelist Introductions

- Karen Scurry, Federal Highway Administration
- Patrick Adams, Maine Department of Transportation
- Matthew Dyrdahl, City of Minneapolis
- Derek Voight, Washington, DC, Department of Transportation (DDOT)

ZERO IS OUR GOAL

A SAFE SYSTEM IS HOW WE GET THERE

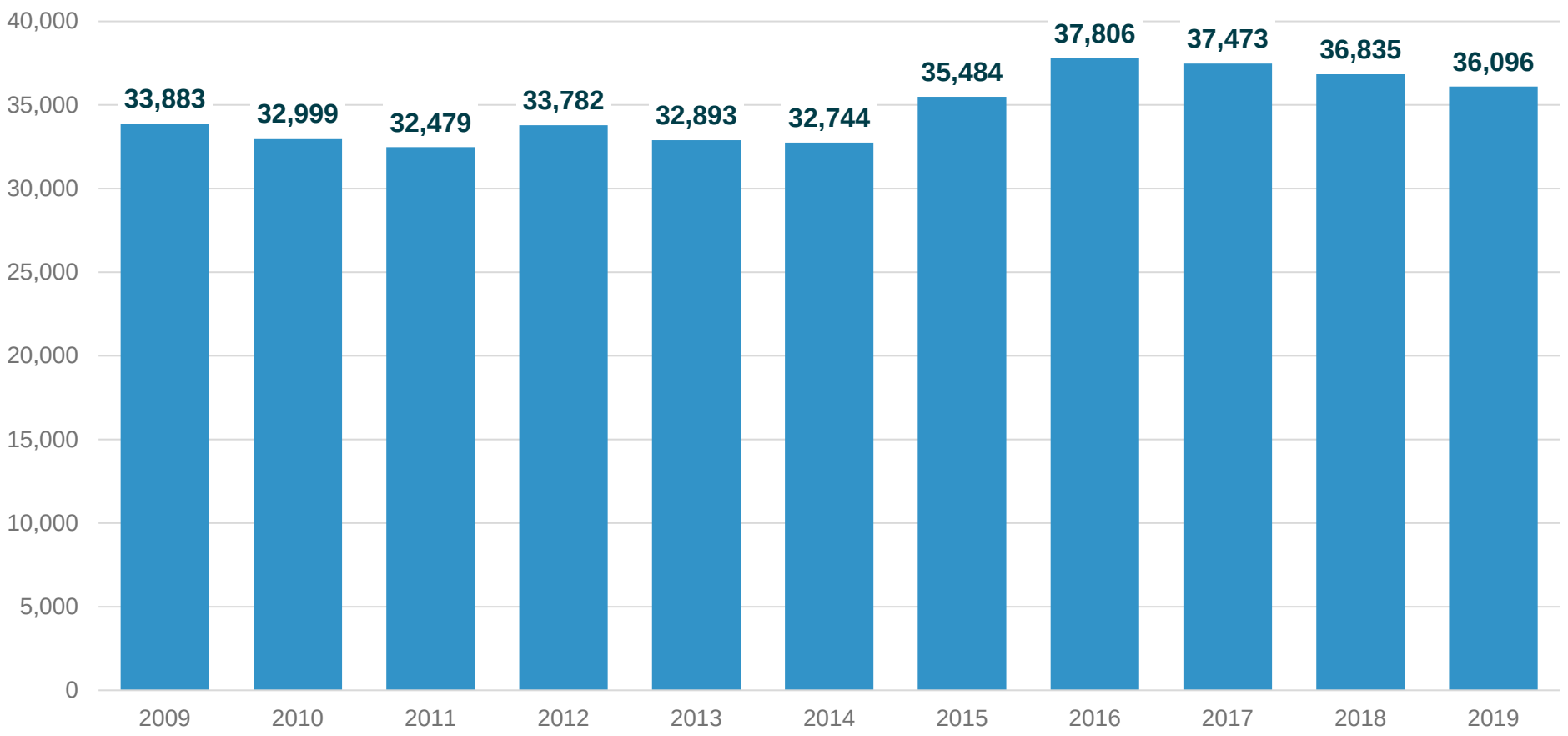
U.S. Department of Transportation

Federal Highway Administration

Using Federal Funds to Accelerate Pedestrian and Bicyclists Safety Improvements

December 14, 2021

THOUSANDS OF LIVES ARE LOST EACH YEAR



Total US Traffic Fatalities
2009-2019

Source: NHTSA

Strategies to Streamline Process

Strategy to Streamline Process	Number of States	Percentage of Responses
Identify systemic safety improvements on local roads eligible for funding.	23	61%
Group multiple projects to reduce administrative burden.	19	50%
Ensure source for local match before projects are selected for implementation.	17	45%
Allow agencies to use their own labor and resources to construct small-scale projects.	15	39%
Allow programmatic categorical exclusions.	12	32%
Complete or contract for safety improvements on local roads.	11	29%
Encourage use of programmatic agreements between State and local agencies.	11	29%
Allow local agencies to use their own material specifications and design standards for roadways off the national highway system.	9	24%
Provide State funds for local safety projects in lieu of Federal-aid highway funds.	6	16%
Provide a single application for multiple funding sources.	6	16%
Distribute funds to MPOs or local entities to distribute to local agencies.	5	13%
Certify a larger local agency to administer projects on behalf of smaller local agencies.	5	13%
Establish a blanket contract to perform safety improvements on local roads.	4	11%
Pay local contractors directly instead of reimbursing local agencies.	4	11%
Use a push-button process to expedite certain projects.	1	3%
Other.	1	3%

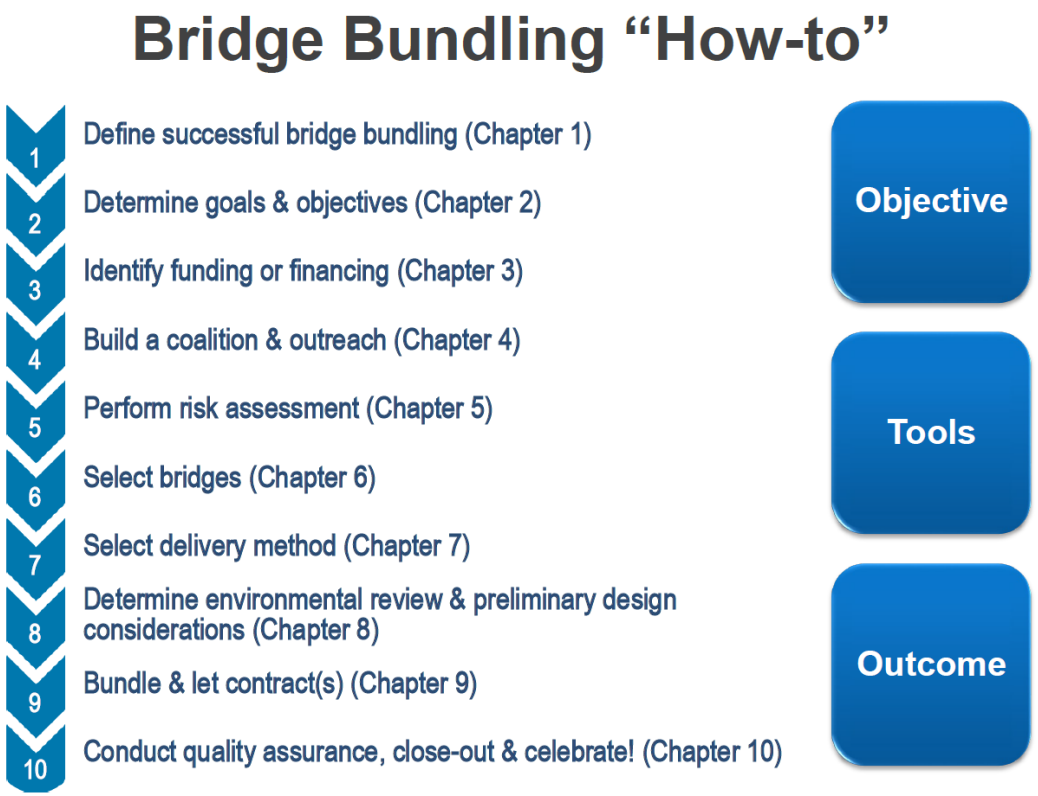
Source: Assessment of Local Road Safety Funding, Training, and Technical Assistance, FHWA, 2013

Project Bundling

Awarding a single contract for several preservation, rehabilitation, or replacement projects helps agencies reduce costs and achieve program goals.

- Benefits
  - Expedited Project Delivery.
  - Reduced Cost
  - Contracting Efficiency.
- EDC-5 Project Bundling Initiative
  - Bridge Bundling Guide

  https://www.fhwa.dot.gov/ipd/pdfs/alternative_project_delivery/bridge_bundling_guidebook_070219.pdf



Define Successful Bundling

- Features could include:
  - Both design and construction, or it could be tiered to allow a combination of work types.
  - Geographic coverage could extend over a county, a highway district, or an entire State.
  - LPAs can combine efforts into one contract.
- Maximum efficiency benefits occur when bundling is used in the following settings:
  - Locations with no, or minimal, ROW takings.
  - Locations with minimal environmental constraints.

Determine Environmental Review and Preliminary Design Considerations

- Environmental Considerations:
  - Most systemic safety projects have little to no environmental impact
  - May be eligible for categorical exclusion
  - Use programmatic agreements
- Other opportunities to streamline environmental review:
  - Include environmental representative on local safety application review committee to verify impacts
  - Separate projects that may have environmental or historic impact
  - Improve coordination (e.g. monthly meetings, MOU)

Successful Safety Bundling Projects

- Florida Design Build Push Button Contract
  - http://www.tampabaytrafficsafety.com/DBPB/_layouts/15/start.aspx#/Shared%20Documents/Forms/AllItems.aspx
- South Carolina Systematic Intersection Improvements
  - https://safety.fhwa.dot.gov/intersection/other_topics/fhwasa12021/
- Minnesota County Bundling
  - LRSPs used to identify project location and needs
  - Lead county responsible for administering the contract, paying contractor and working with participating counties
  - Completed interagency agreements to document process
- Montana Job-Order Contracting

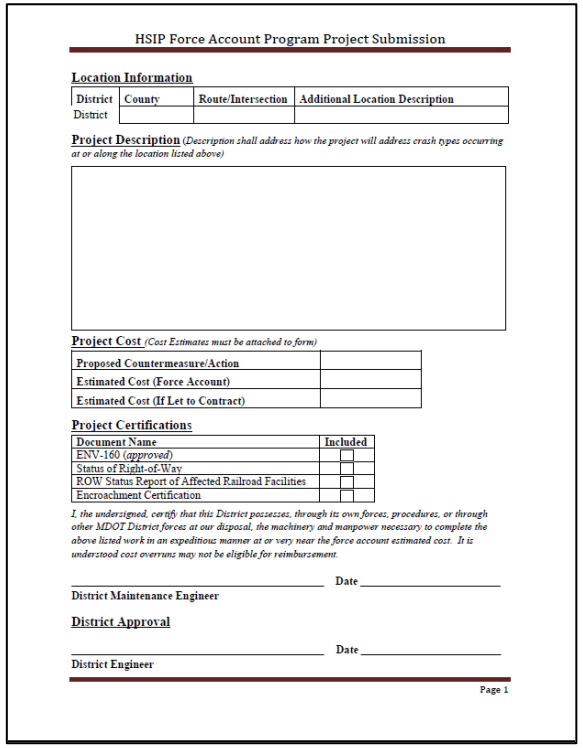
FDOT Found DBPB Shortens the Process up to 70 Percent (e.g. 3-5 years to 6-9 months)

ID/IQ CONTRACTING FOR LOW-COST FEDERAL-AID CONSTRUCTION CONTRACTS

- State DOT may use ID/IQ contracting and Job Order Contracting (JOC), a form of ID/IQ contracting, to perform a variety of construction work including……safety improvements….
- ID/IQ is a type of contract that:
  - Is short term base contract (1-2 years) that is awarded by competitive bidding to the lowest responsive bidder. The Division Administrators may allow contract extensions not to exceed 5 years.
  - The total value of task or work orders may not exceed $2,000,000 per year on average over the contract term.
  - Actions covered by the contract will be for construction projects qualifying for National Environmental Policy Act (NEPA) categorical exclusions listed under 23 CFR 771.117
  - The work will comply with all applicable Title 23 requirements during construction
- ID/IQ contracts that involve best value awards, multiple award contracts, exceed the low-cost threshold, or are not otherwise within the limitations of this Notice require SEP-14 approval
- FHWA Notice: https://www.fhwa.dot.gov/legsregs/directives/notices/n5060-2.cfm

Use of Public Agency Forces

- Public Agency Force Account
  - Agency must demonstrate that force account is more cost effective than contracting by competitive bidding
  - FHWA Policy: https://www.fhwa.dot.gov/legsregs/directives/orders/50601.cfm
  - Example: Mississippi DOT established separate cost item and template for Force Account projects
- Materials Procurement
  - Procurement contract only (no construction)
  - Materials installed with local forces and local funds
  - Examples: Ohio Township Sign program and Maine Batch Procurement and Dissemination of Rectangular Rapid Flashing Beacons (RRFB)



HSIP Force Account Program Project Submission

Location Information

District	County	Route/Intersection	Additional Location Description
District			

Project Description *(Description shall address how the project will address crash types occurring at or along the location listed above)*

Project Cost *(Cost Estimates must be attached to form)*

Proposed Countermeasure/Action	
Estimated Cost (Force Account)	
Estimated Cost (If Let to Contract)	

Project Certifications

Document Name	Included
ENV-160 *(approved)*	
Status of Right-of-Way	
ROW Status Report of Affected Railroad Facilities	
Encroachment Certification	

I, the undersigned, certify that this District possesses, through its own forces, procedures, or through other MDOT District forces at our disposal, the machinery and manpower necessary to complete the above listed work in an expeditious manner at or very near the force account estimated cost. It is understood cost overruns may not be eligible for reimbursement.

_____ Date _____

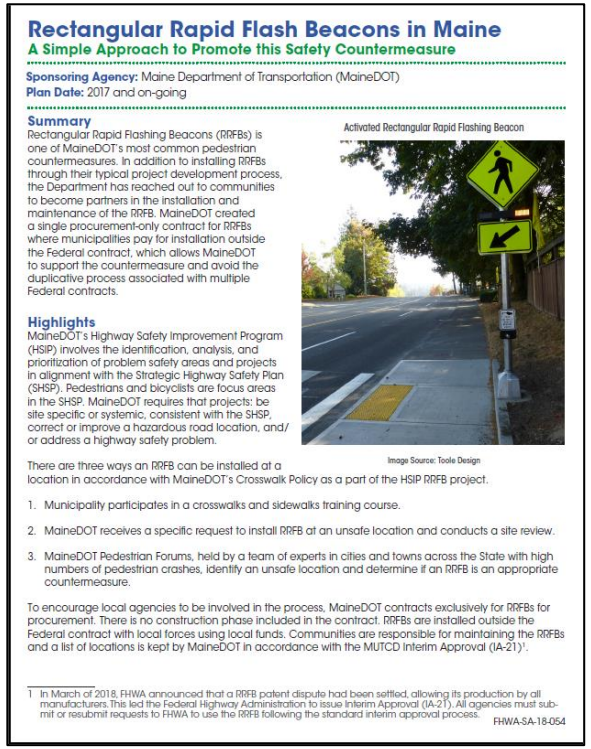
District Maintenance Engineer

District Approval

_____ Date _____

District Engineer

Page 1



Rectangular Rapid Flash Beacons in Maine

A Simple Approach to Promote this Safety Countermeasure

Sponsoring Agency: Maine Department of Transportation (MaineDOT)
Plan Date: 2017 and on-going

Summary

Rectangular Rapid Flashing Beacons (RRFBs) is one of MaineDOT's most common pedestrian countermeasures. In addition to installing RRFBs through their typical project development process, the Department has reached out to communities to become partners in the installation and maintenance of the RRFB. MaineDOT created a single procurement-only contract for RRFBs where municipalities pay for installation outside the Federal contract, which allows MaineDOT to support the countermeasure and avoid the duplicative process associated with multiple Federal contracts.

Activated Rectangular Rapid Flashing Beacon

Image Source: Toole Design

Highlights

MaineDOT's Highway Safety Improvement Program (HSIP) involves the identification, analysis, and prioritization of problem safety areas and projects in alignment with the Strategic Highway Safety Plan (SHSP). Pedestrians and bicyclists are focus areas in the SHSP. MaineDOT requires that projects: be site specific or systemic, consistent with the SHSP, correct or improve a hazardous road location, and/or address a highway safety problem.

There are three ways an RRFB can be installed at a location in accordance with MaineDOT's Crosswalk Policy as a part of the HSIP RRFB project.

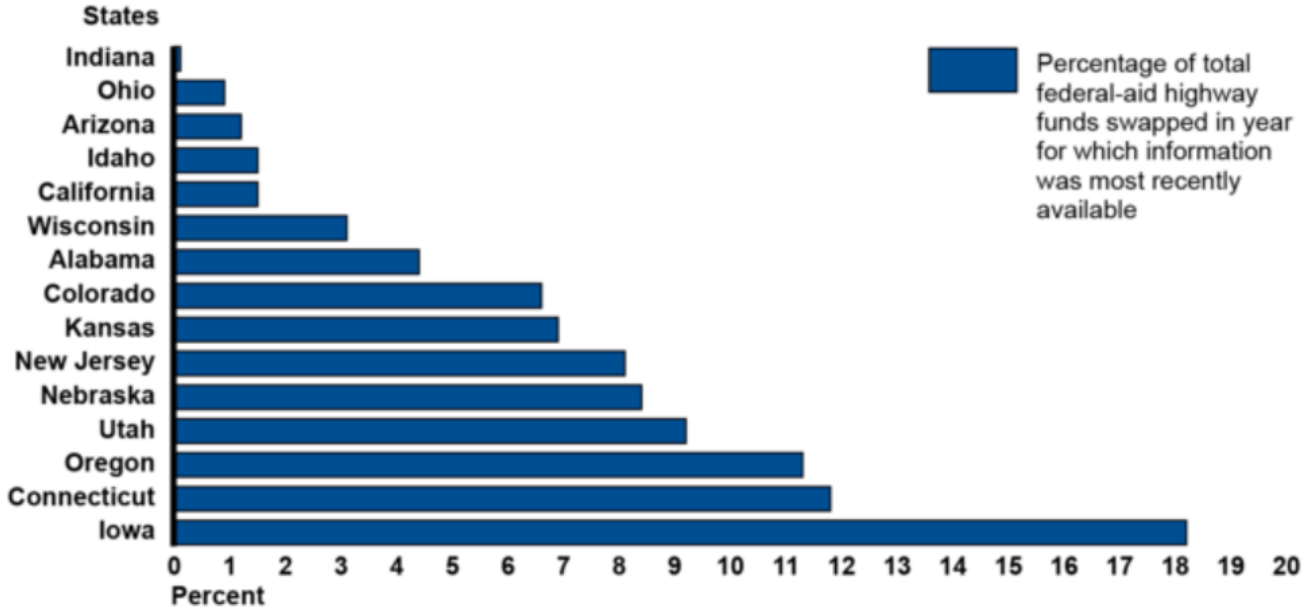
1. Municipality participates in a crosswalks and sidewalks training course.
2. MaineDOT receives a specific request to install RRFB at an unsafe location and conducts a site review.
3. MaineDOT Pedestrian Forums, held by a team of experts in cities and towns across the State with high numbers of pedestrian crashes, identify an unsafe location and determine if an RRFB is an appropriate countermeasure.

To encourage local agencies to be involved in the process, MaineDOT contracts exclusively for RRFBs for procurement. There is no construction phase included in the contract. RRFBs are installed outside the Federal contract with local forces using local funds. Communities are responsible for maintaining the RRFBs and a list of locations is kept by MaineDOT in accordance with the MUTCD Interim Approval (IA-21)[1].

1 In March of 2018, FHWA announced that a RRFB patent dispute had been settled, allowing its production by all manufacturers. This led the Federal Highway Administration to issue Interim Approval (IA-21). All agencies must submit or resubmit requests to FHWA to use the RRFB following the standard interim approval process.

FHWA-SA-18-054

Federal Fund Swap



[Federal-Aid Highways: States and Local Governments Reported Benefits to Federal Highway Fund Swapping, but Impacts Cannot be Definitively Determined | U.S. GAO]

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HSIP

Highway Safety Improvement Program

Data Driven Decisions

Karen Y. Scurry, P.E.
FHWA Office of Safety Programs
202-897-7168
karen.scurry@dot.gov

MaineDOT's Systemic Pedestrian Safety Effort

Patrick Adams

MaineDOT's Active Transportation Planner

Why is MaineDOT focused on pedestrian safety?

Baby Boy Killed by Truck in Alton, Maine

The Portland Press Herald reported that the incident happened near Alton Elementary School

By Alexandra Prim

Published at 9:51 PM EDT on May 19, 2017 | Updated at 10:47 PM EDT on May 19, 2017

An 18-month-old boy was killed Friday after being run over by a pickup truck in Alton, Maine, said police.

LOCAL & STATE > Posted November 20, 2017 | Updated November 21, 2017

INCREASE FONT SIZE

Augusta man, 81, killed after leaving church supper Saturday night

Emile Morin of Augusta was an active member of St. Augustine Catholic Church on Sand Hill.

BY CHARLES EICHACKER KENNEBEC JOURNAL AND KEITH EDWARDS KENNEBEC JOURNAL

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Morning Sentinel

Local&State

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ne.com

Fatal accidents spur safety campaign

State DOT, Bicycle Coalition of Maine talk pedestrian rules in Winslow

BY MADELINE ST. AMOUR
Staff Writer

WINSLOW — After a statewide spike in pedestrian fatalities and a crash that killed an eighth-grade boy in Lewiston, the Maine Department of Transportation spearheaded a project it's bringing to communities to make the roads safer for Mainers who like to walk.

In November 2016, Jayden Cho-Sargent, 13, was hit by a pickup truck while in a crosswalk on his way to school. He died at the scene.

"It really galvanized the city of Lewiston," said Patrick Adams, bicycle and pedestrian program manager at the state department, "but it also became a rallying cry for a lot of people that we really need to do something."

At the same time, the number of pedestrian fatalities jumped from nine in 2014 to 19 in 2016, and 15 so far this year.

Now the department is traveling to cities and towns across Maine to collect information about communities' safety concerns, which it hopes to turn into actionable pedestrian safety mitigation plans.

On Wednesday night, Adams and representatives from the Bicycle Coalition of Maine, which has partnered with the state on the project, held a forum at Winslow Elementary School to talk with residents about their concerns and provide safety tips.

"We don't know the community like these people do," he said, adding that he doesn't see the project as the state's task or the coalition's task, but as an opportunity for the community.

This is the department's eighth presentation, Adams said, adding that it plans to visit a total of 21 communities. It began the process in May in Westbrook.

The state looked at data on a map of the state and saw 10 "clusters," which hold 21 communities, where fatal pedestrian crashes seemed to occur more often, Adams said.

While Winslow might not have a high rate of accidents, he said, it is a neighbor of Waterville, which is a different story.

"We know you oftentimes will go across the bridge, so you might be involved in one of those situations," he said.

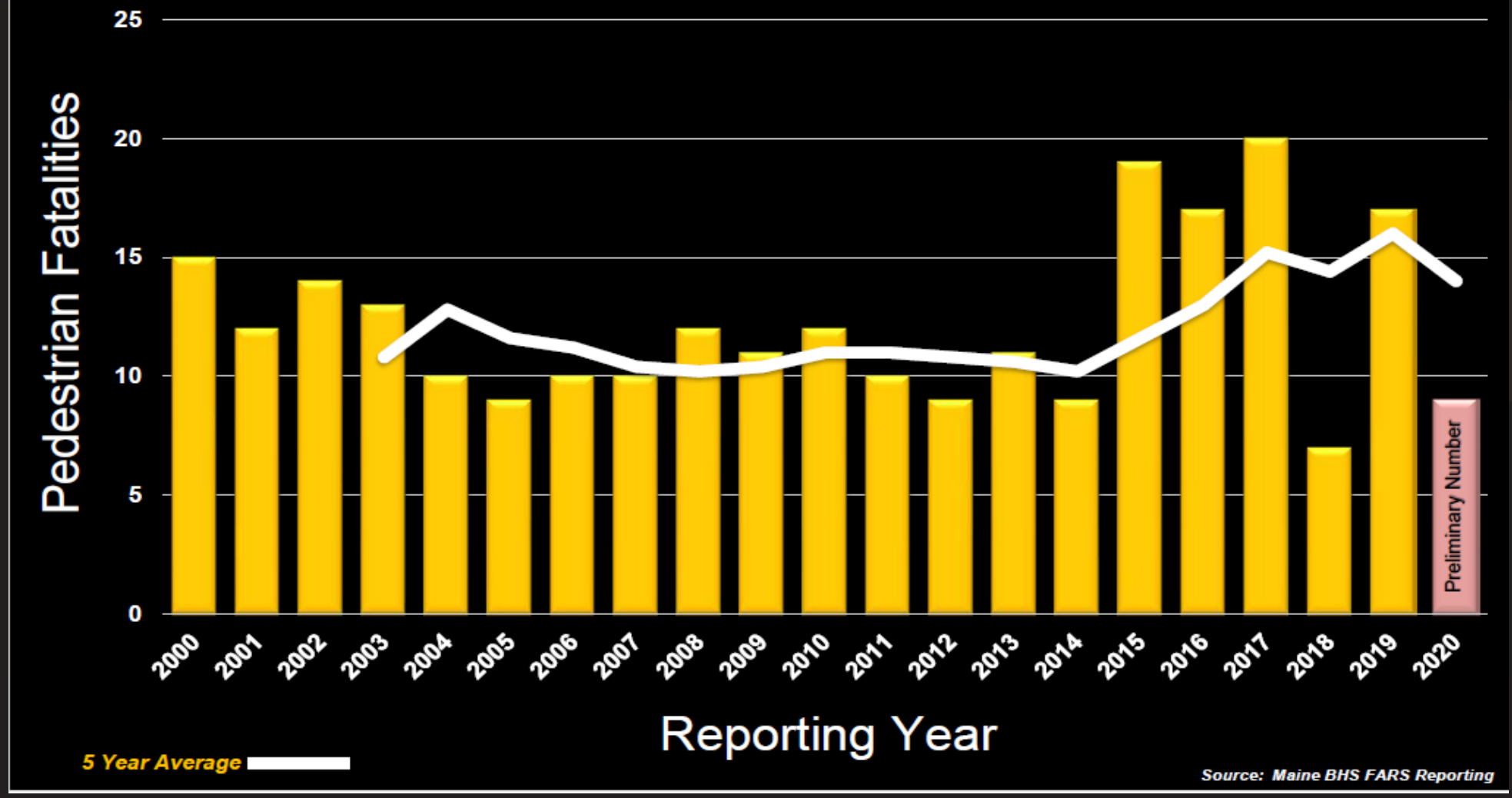
SAFETY, PAGE B2

Maine sets 24-year record for pedestrian fatalities in 2017

Nick McCrea | BDN

Bangor public safety personnel clean a section of roadway after a car-pedestrian accident at the intersection of Broadway and Garland Street in November 2015.

Maine Fatal Pedestrian Crashes (2000-2020)



2021 Fatalities to date = 18

How does the program work?

- HSIP eligibility (as-usual)
- Non-construction supply acquisition contracts
- Not Force Account
- Buy America applies

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Federal Highway Administration

MaineDOT

HEADS UP!
SAFETY IS A TWO-WAY STREET.

How does the program work?

- HSIP eligibility (as-usual)
- Non-construction supply acquisition contracts
- Not Force Account
- Buy America applies

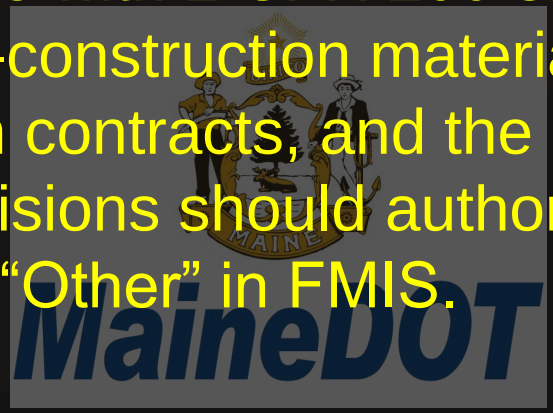
These highway safety improvement projects are eligible for HSIP Funds because they are identified in Maine's SHSP, they address highway safety problems and/or improve hazardous road locations, installation locations and use cases are determined through a systemic and data driven process, and project types are included in 23 USC 148(a)(4)(B).

HEADS UP! SAFETY IS A TWO-WAY STREET.

How does the program work?

- HSIP eligibility (as-usual)
- Non-construction supply acquisition contracts
- Not Force Account
- Buy America applies

Because the per-unit acquisition cost is less than $5,000, State DOTs should utilize state procurement procedures in accordance with 2 CFR 200.314 for these non-construction material / supply acquisition contracts, and the local FHWA Divisions should authorize the project as “Other” in FMIS.



How does the program work?

- HSIP eligibility (as-usual)
- Non-construction supply acquisition contracts
- Not Force Account
- Buy America applies

These highway safety improvement projects do not require agency force account approval in accordance with FHWA Policy on Agency Force Account Use, because the work is performed by local agency staff and with local agency funds at the discretion of the State DOT.

MaineDOT

HEADS UP! SAFETY IS A TWO-WAY STREET.

How does the program work?

- HSIP eligibility (as-usual)
- Non-construction supply acquisition contracts
- Not Force Account
- Buy America applies

U.S. Department of Transportation
Federal Highway Administration

These highway safety improvement projects must comply with the Buy America requirements of 23 U.S.C. 313.

MaineDOT

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Maine's Systemic Ped Safety Program

Rectangular Rapid Flashing Beacons

Dynamic Speed Feedback Signs

School Zone Feedback Signs & Beacons

In-Street Pedestrian Crossing Signs

HEADS UP!
SAFETY IS A TWO-WAY STREET.

Maine's Systemic Ped Safety Effort

Rectangular Rapid Flashing Beacons

- Annual program that began in 2010
- $37,000 initial funding level
- $250,000 current funding level
- As of 2021 – 228 Units Distributed
- Total allocation to date - $1,357,000

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Maine's Systemic Ped Safety Effort

Dynamic Speed Feedback Signs

- Annual program that began in 2017
- $200,000 initial funding level
- $200,000 current funding level
- As of 2021 – 218 Units Distributed
- As of 2021 – 214 Towns Participating
- Total allocation to date - $800,000

HEADS UP!
SAFETY IS A
TWO-WAY STREET.

Maine's Systemic Ped Safety Effort

School Zone Feedback Signs & Beacons

- Annual program that began in 2020
- COVID = 2020 Program Delay
- $500,000 current 2-year funding level
- As of 2021 – 42 communities identified
- Total allocation to date - $500,000

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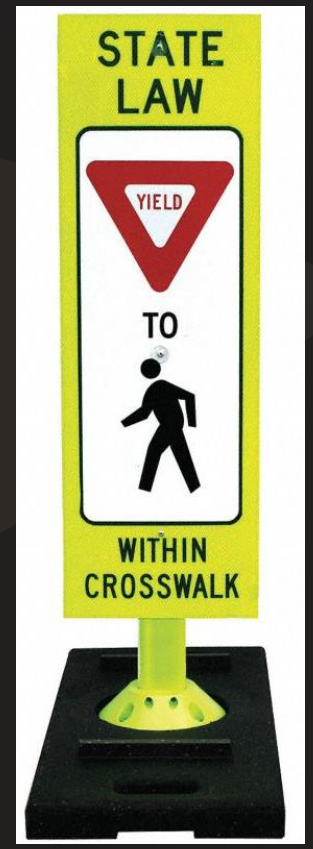
SAFETY IS A TWO-WAY STREET.

Maine's Systemic Ped Safety Effort

In-street Pedestrian Crossing Signs

- New annual program that begins in 2023
- COVID = 2021 Program Delay
- $51,000 current funding level
- As of 2021 – Projected for 50 communities
- Total allocation to date - $51,000



HEADS UP!
SAFETY IS A
TWO-WAY STREET.

MaineDOT

understands

that

HEADS UP!
SAFETY IS A
TWO-WAY STREET.

Making it happen -

Rectangular Rapid Flashing Beacons (RRFBs)

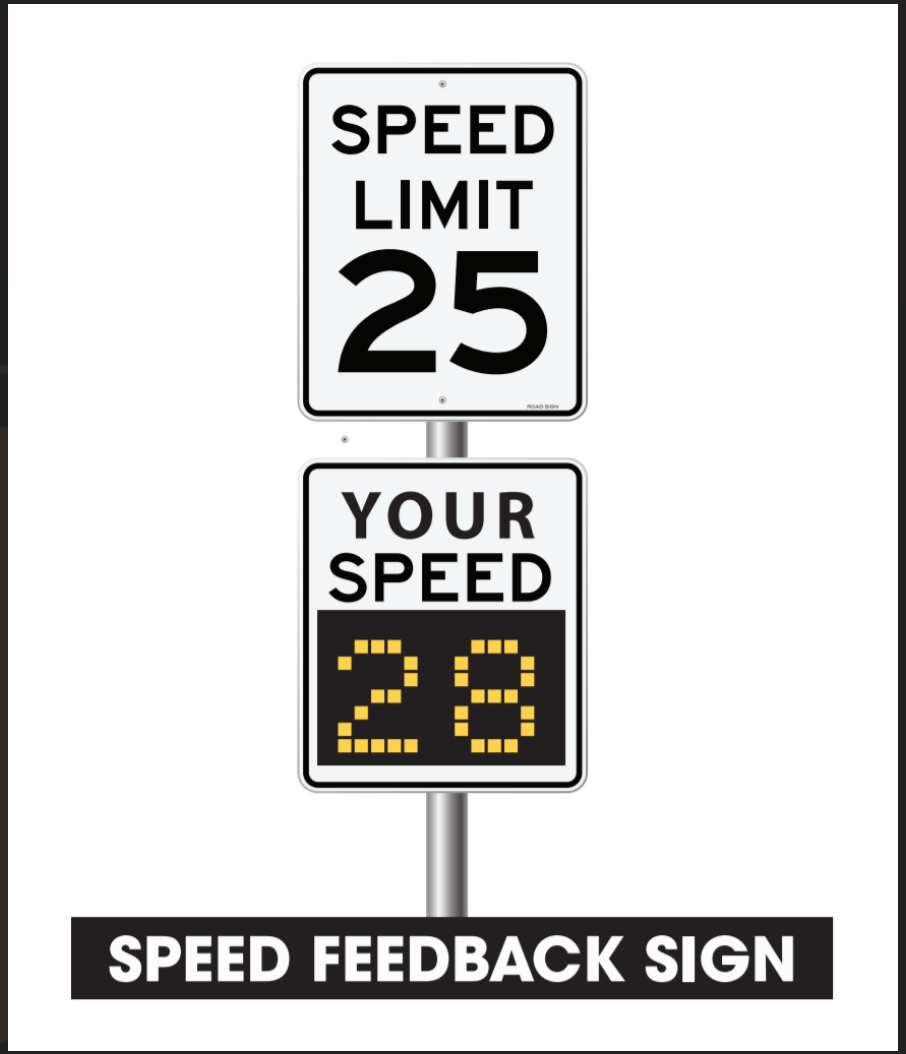
- 3 Deployment Methods
  - LTAP Training + RSA
  - Special Request + RSA
  - Ped Safety Forums + RSA
- Installed in existing ROW
- Compliant with ADA (Additional grants available)

HEADS UP! SAFETY IS A TWO-WAY STREET.

Making it happen -

Dynamic Speed Feedback Signs (DSFSs)

- Training Required
- Data Sharing with Law Enforcement
- Short-term installations at each location
- Seasonal utilization is permitted



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SAFETY IS A
TWO-WAY STREET.

Making it happen -

School Zone Feedback Signs & Beacons (SZFSs)

- Collaboration with Municipality & School District
- May only be installed within a School Zone
- Active only during drop-off / pick-up (30 minutes before / after each)
- Training Required
- Data Sharing with Law Enforcement

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Making it happen -

<u>In-street Pedestrian Crossing Signs</u>
(R1-6s)

- Seasonal utilization is permitted
- Permanent installation prohibited
- Targets higher risk and problematic crossings
- Provided in pairs to communities

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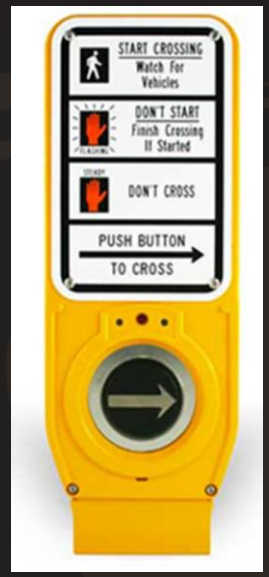
SAFETY IS A
TWO-WAY STREET.

What is coming in the future …?

- Advanced Yield Markings?
- Raised Crosswalks?
- Pedestrian Hybrid Beacons?
- Leading Pedestrian Intervals?
- Accessible Pedestrian Signals?
- LED Enhanced Signage?



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Questions

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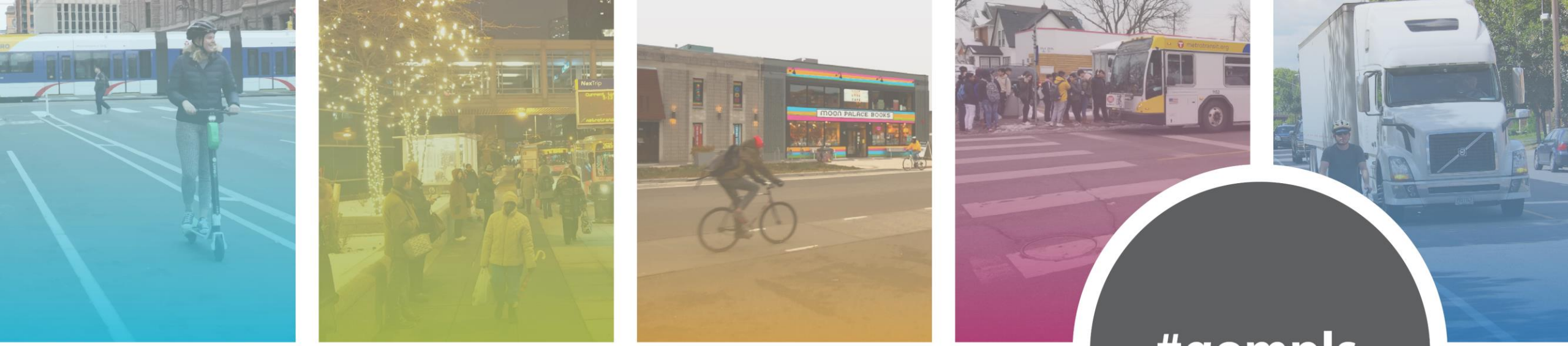


Leap Not Creep – Accelerating Ped/Bike Safety Projects Webinar

Matthew Dyrdahl, Minneapolis Bicycle and Pedestrian Coordinator

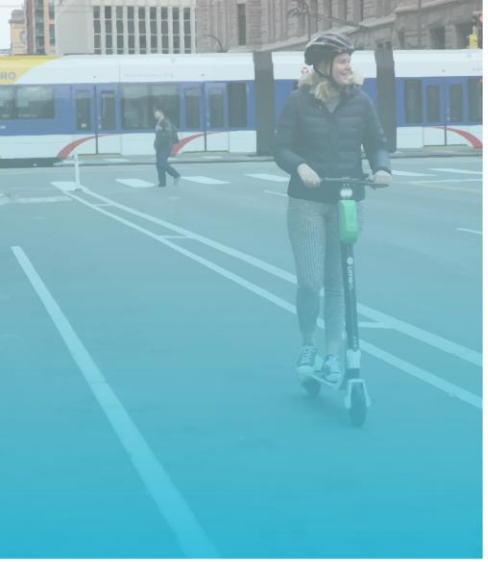
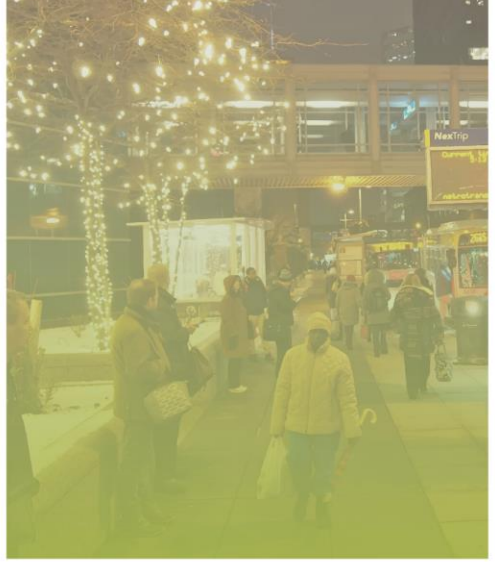
Minneapolis
City of Lakes
Transportation Action Plan

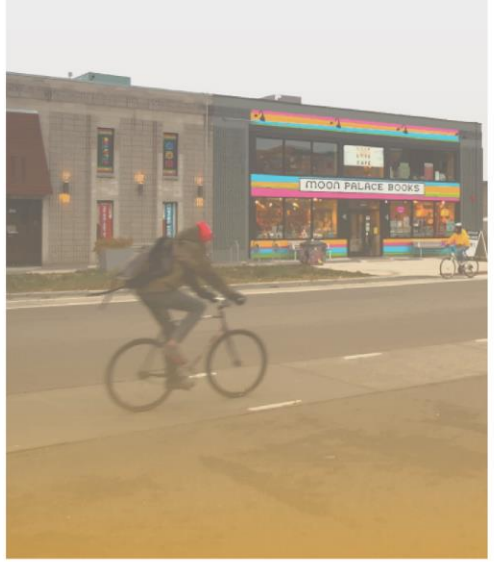
Bicycle and Pedestrian Coordinator Role

- Manage the PAC & BAC – connect with advocates
- Quick build safety improvement projects
- Technical coordination (capital project delivery & operations)
- Open Streets Minneapolis
- Walk, Bike, Roll (WBR) Audit Framework – pilot

Topics for today(and order of presentation)

- Vision Zero – Speed of people driving and impacts for people walking, biking, and connecting to transit
- Street crossing improvements
- Bikeways for people of all ages and abilities

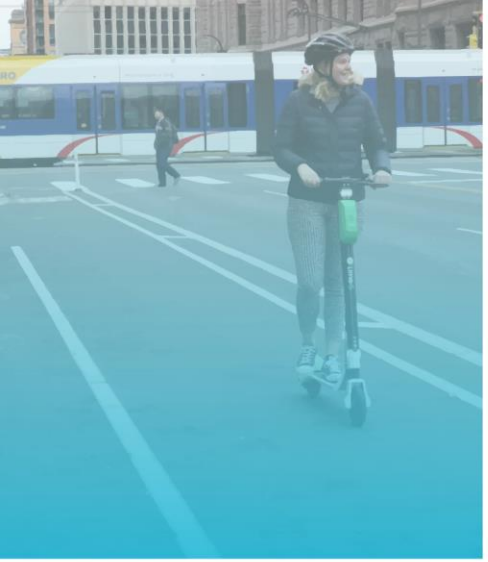
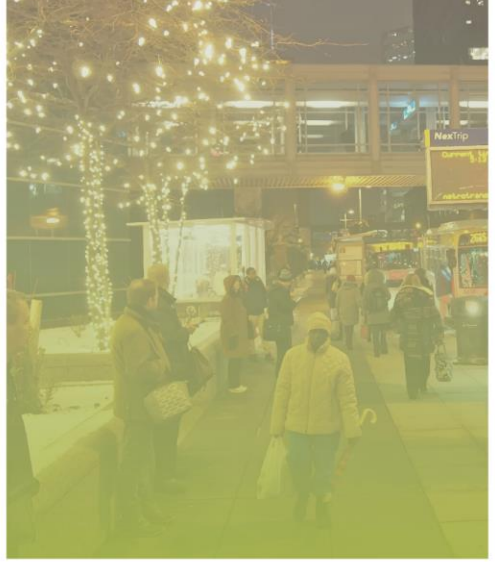



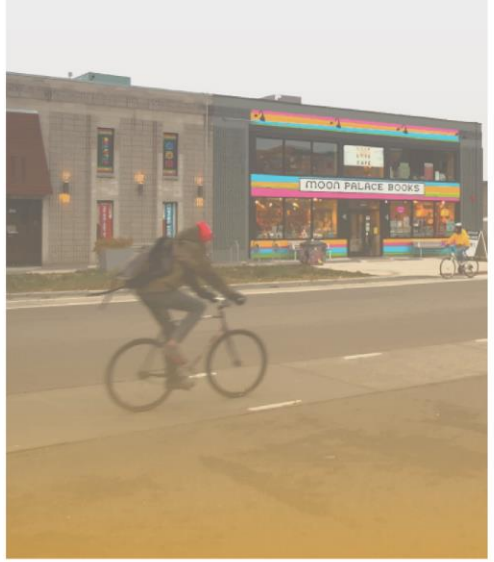


#gompls

Vision Zero projects (quick build)

https://www.minneapolismn.gov/government/programs-initiatives/visionzero/actions-taken/vz-projects/



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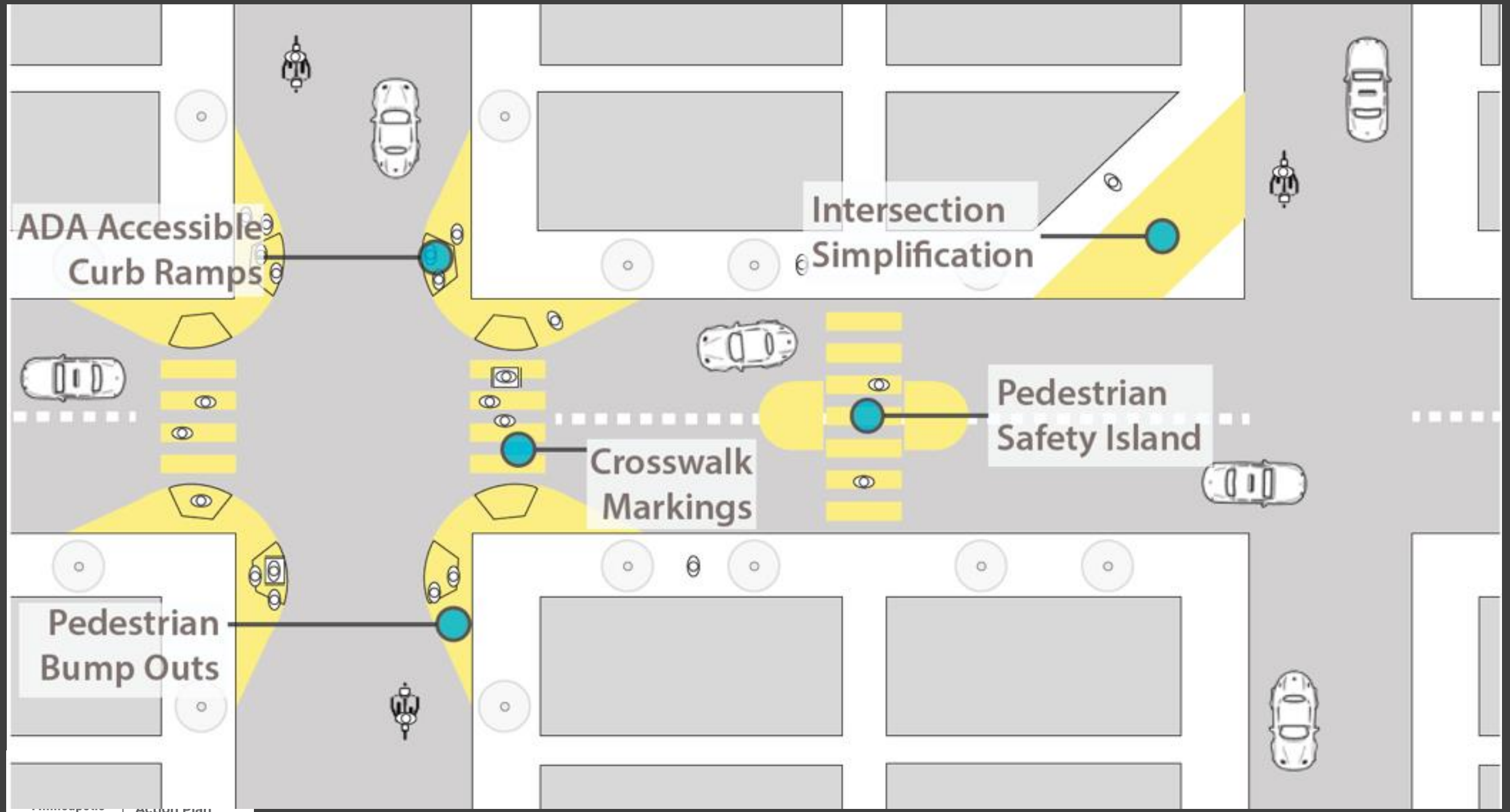
Accelerating pedestrian safety “quick build” projects

Street Crossings

Minneapolis City of Lakes | Transportation Action Plan


FILSON

Minneapolis
City of Lakes


ADA Accessible Curb Ramps
Intersection Simplification
Pedestrian Safety Island
Crosswalk Markings
Pedestrian Bump Outs


TEST
BUMPOUT


NO PARKING
S 9th Av
Cooler


YIELD
ALL WAY
30 FEET


NO
STOPPING


STOP

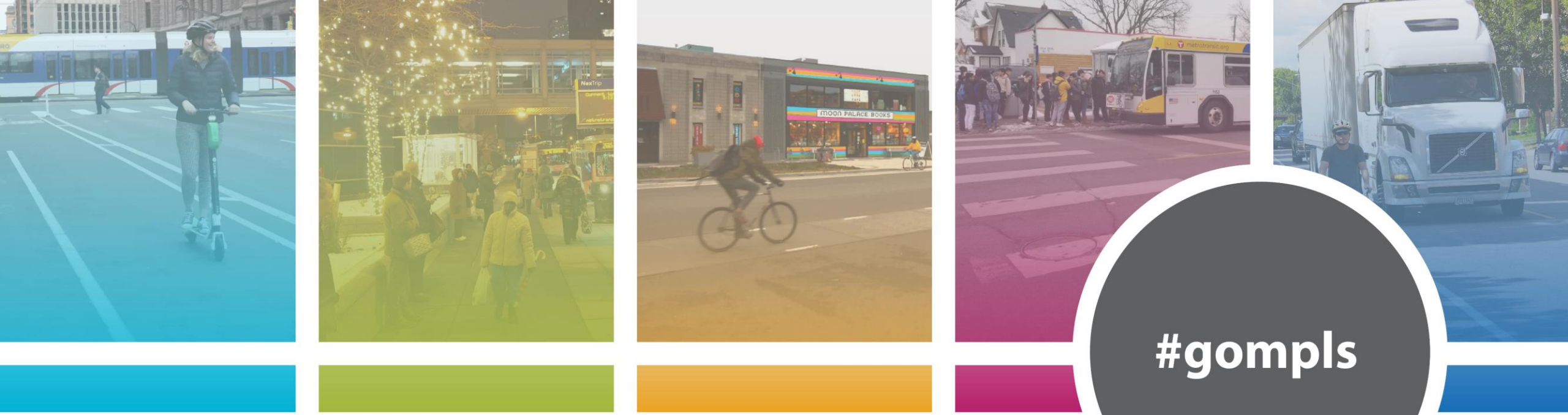

NE Garfield St
NE 34th Av
STOP


STOP

2021 Vision Zero Quick-Build Projects

- Improvements were made to the intersections of:
  - Bryant Ave @ Dowling Ave N
  - 21st St @ Lyndale Ave N
  - 18th St @ Lyndale Ave N
  - 8th St @ Chicago Ave
  - 15th St @ Chicago Ave
  - 35th St @ Nicollet Ave
  - 37th St @ Nicollet Ave
- 4-3 conversion on Lyndale Ave N south of Broadway


STOP
30 FEET



Accelerating bikeway projects

Bikeways – All Ages & Abilities (AAA)

November 18, 2020

Minneapolis City of Lakes | Transportation Action Plan


Leaning Tower of Pizza
RESTAURANT & BAR
Lyndale Av
PENSKE
Truck Rental


N Lowry Av
BIKE LANE
BIKE LANE
SPEED LIMIT
1120
5E
GUARANTEED OFFER
ONE WAY
GO


BIKE
LANE


BIKE LANE
NO MOTOR VEHICLES
STOP


BIKE LANE
SNOW EMERGENCY ROUTE
612-348-SNOW


STOP
ALL WAY
TURNING VEHICLES
STOP FOR
YIELD TO PEDS


DO NOT
ENTER
EXCEPT
BICYCLES
RAIL
ROAD
CROSSING

1st Ave S protected bikeway


1st Ave S


Prodigal
PUBLIC HOUSE
YOGA
ONE WAY


SCHOOL BUS
STOP


Hennepin
Ave
Downtown

Hennepin Ave Downtown

4th St Downtown

Successes and challenges

- Successes
  - Clear policy direction and support for implementation
  - Funding in the capital program
  - Successful implementation
  - Maintenance support
- Challenges
  - New treatments are often challenging
    - Proving viability of a treatment is important
    - Willingness to try new things is important
  - Scaling up is challenging
    - Concept and engineering design can be streamlined but is still needed (simple striping and bollard plan sheet)
    - Capacity to install and maintain doesn't automatically go up with implementation dollars.

Final thoughts (and potential advice)

- If you're new to quick build ped/bike safety improvements
  - Try it (test/pilot/demonstration)
  - Evaluate (did it work/did the world end/do people like it)
  - Repeat
- If you've had some success
  - Work on scaling up
  - Focus on capacity to deliver
  - Efficiency of engagement and notification
- For more on "how to"
  - Mndot demonstration project guide: http://www.dot.state.mn.us/saferoutes/demonstration-projects.html

DDOT Efforts to Accelerate Pedestrian and Bicyclist Improvements

Derek Voight

2021 Summer of Safety Initiative

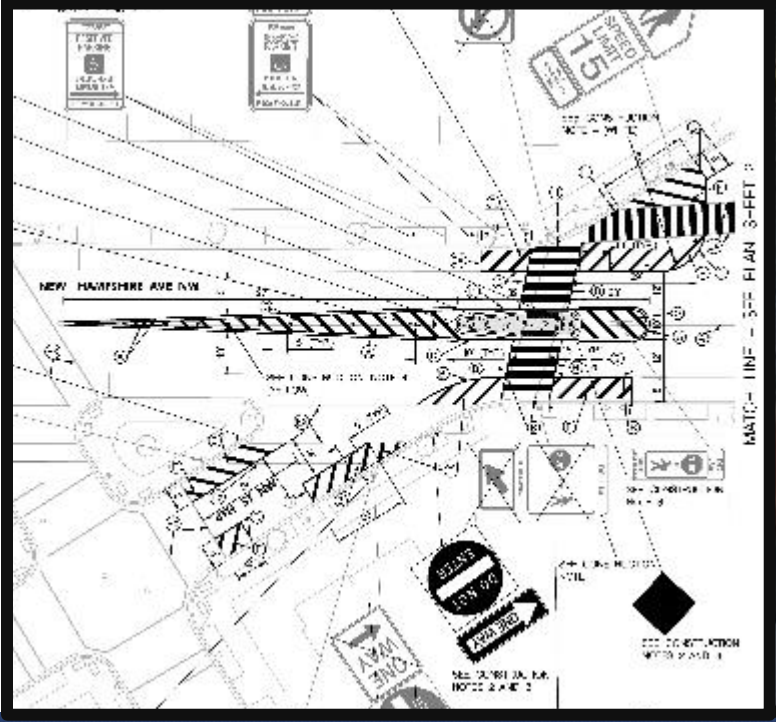
To rapidly deliver safety countermeasures in accordance with Vision Zero, DDOT is advancing design and construction of over 100 locations this summer:

- Livability Study sites - 14 locations
- Highway Safety Improvement Program (HSIP) - 25 intersections
- Pedestrians and Traffic Calming Improvements Program - 18 locations
- Pedestrian Flashers and Driver Feedback Signs - 53 locations

VISION ZERO
SAFE STREETS FOR WASHINGTON, DC

Livability Study Improvements

- Curb extensions
- Pedestrian refuge islands
- Geometric realignment, removal of excess travelled way
- Enhanced green spaces
- Increased signage



HSIP Pedestrian Improvements

- Programmatic improvements
  - Leading Pedestrian Intervals
  - No Turn On Red
  - ADA improvements including Accessible Pedestrian Signals, missing ramps
  - Left turn traffic calming

HSIP Pedestrian Improvements

- Site specific improvements
  - Parking clearance, corner daylighting
  - Turn restriction/conflict reduction
  - Phasing improvements
  - Positive guidance
    - Signing
    - Markings such as extension lines, lane lines, no parking areas, bike lanes
    - Bike lane modernization, connections, protection

Functional Change to HSIP Delivery

- Prior HSIP delivery was programmed via the Signal Mod process
- 2021 SoS moved this to an aggressive delivery timeline
  - Study conclusion > Signal design (2-4 weeks) > Construction delivery (4-6 weeks)
  - Delivery 25 intersections to substantial completion between April 2021 – September 2021
    - Substantial completion due to supply chain leads
- Changes for 2022 HSIP
  - Adjusted project timelines to declutter deliverable timelines
  - Preordered materials in response to supply chain lead times
  - Migrated to an injury based CCI metric for site selection

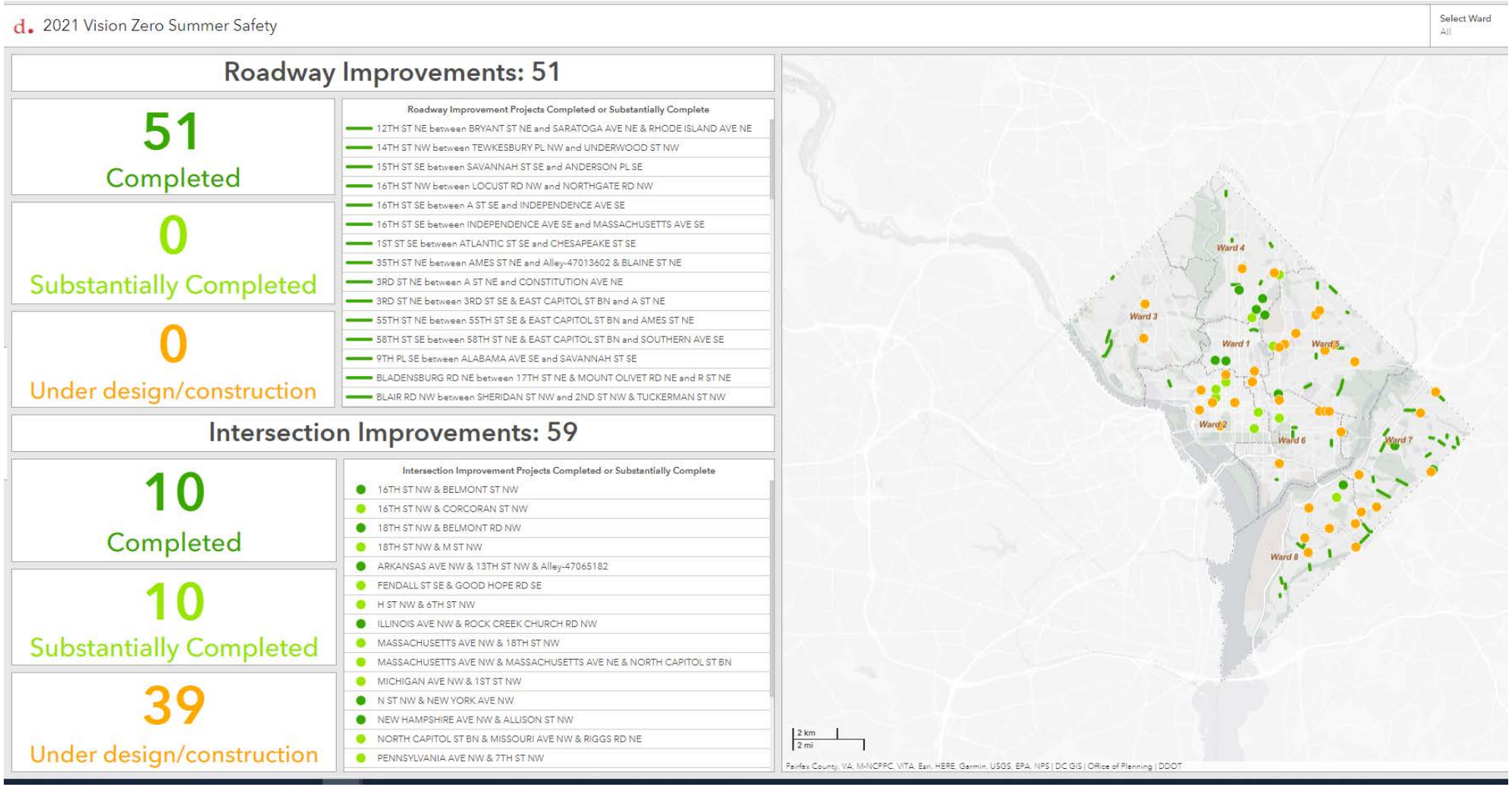
Pedestrian & Traffic Calming Improvements

- Intersection/corner daylighting
- Parking boxes
- High visibility crosswalks
- Centerlines
- Signing improvements
- Marking improvements

Electronic Interventions

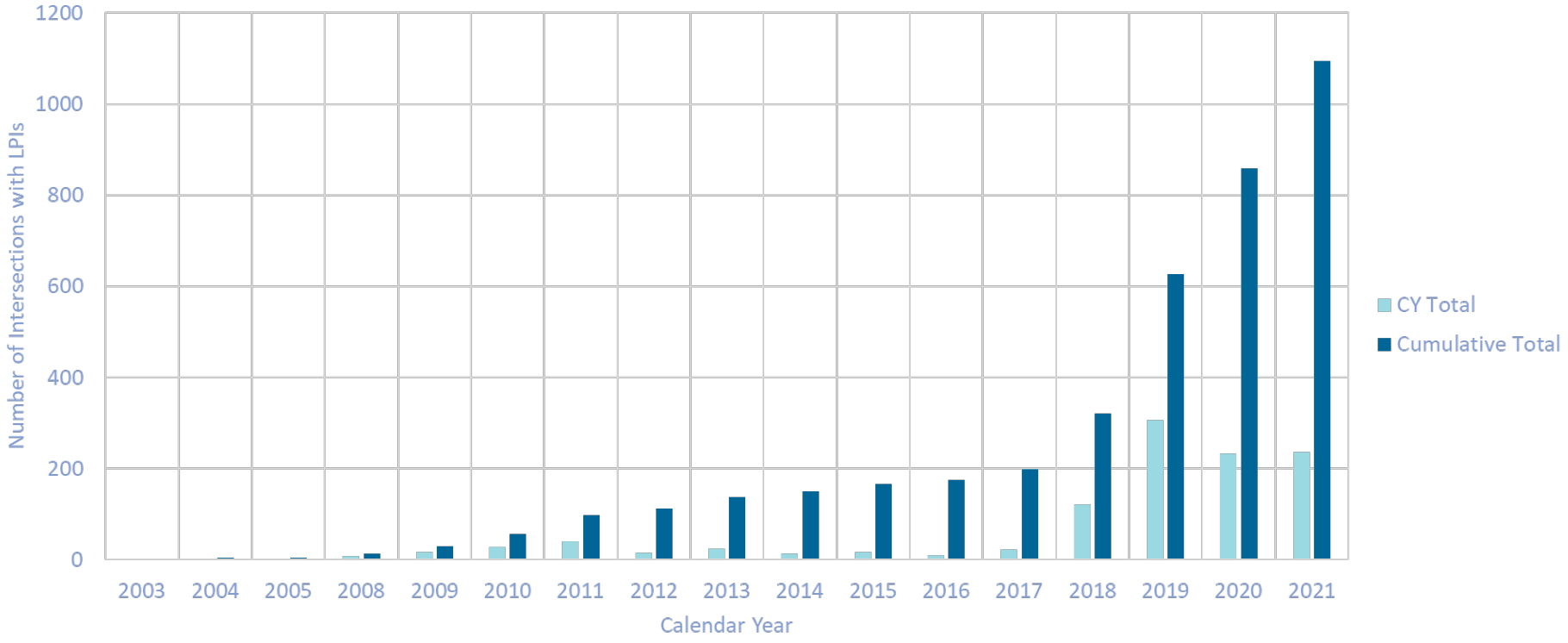
- Selection Criteria for Solar LED Pedestrian Warning (W11-2) signs
  - Pedestrian activity
  - Presence of schools adjacent to segment
  - High number of pedestrian-involved crashes
  - Traffic Safety Requests
    - Speeding or failed to stop for pedestrian
  - Multilane uncontrolled crossings
  - Solar coverage at both ends of crosswalk (field determined)

2021 Vision Zero Summer Safety Dashboard



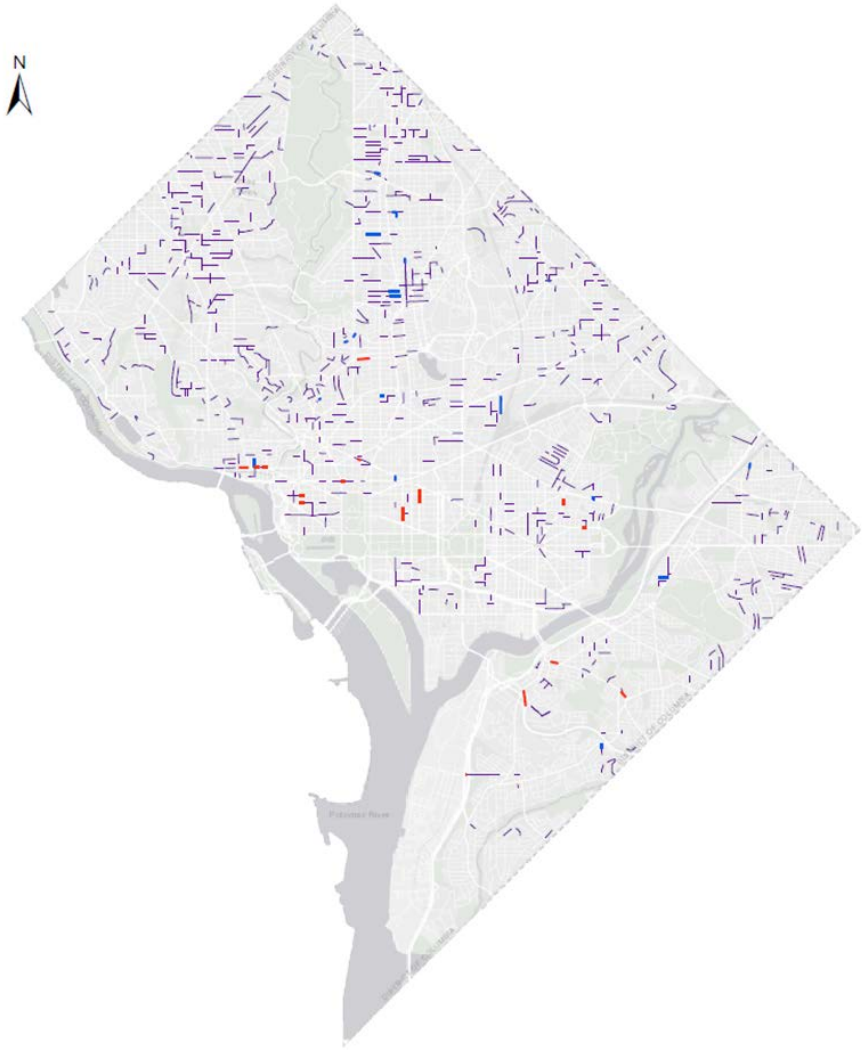
Commitment to Leading Pedestrian Intervals

- LPIs in the city: 1094
- Percent of Intersections with LPIs in 2018-2021: 82%



Resurfacing Safety Improvement Program (RSIP)

- Conducted screening of all segments scheduled for repaving
- Prioritized segments for safety reviews
- Developed marking plans and signage work orders
- Pedestrian and bicyclist improvements include
  - Warning signs
  - Marked curb extensions
  - Upgraded crosswalks
  - Sharrows and bike lane markings



Screening Methodology

Main Factor	Sub Factor	How is it Measured?	Range of Possible Scores	Weight
Crash Patterns	Fatal/suspected serious injury crashes per square mile	Normalized based on Rank among all Pavement Plan segments	0 lowest Rank → 1 Highest Rank	10%
	Suspected minor injury crashes per square mile	Normalized based on Rank among all Pavement Plan segments	0 lowest Rank → 1 Highest Rank	8%
	Other/no injury crashes per square mile	Normalized based on Rank among all Pavement Plan segments	0 lowest Rank → 1 Highest Rank	2%
	Pedestrian-involved crashes per square mile	Normalized based on Rank among all Pavement Plan segments	0 lowest Rank → 1 Highest Rank	10%
	Bicycle-involved crashes per square mile	Normalized based on Rank among all Pavement Plan segments	0 lowest Rank → 1 Highest Rank	10%
	Delta Change by number of crashes (2017~2019)	Normalized based on Rank among all Pavement Plan segments	0 lowest Rank → 1 Highest Rank	5%
	Delta Change by number of crashes (2017~2020)	Normalized based on Rank among all Pavement Plan segments	0 lowest Rank → 1 Highest Rank	4%
Pedestrian/Bike Accessibility	Pedestrian Master Plan Score	Normalized based on Rank among all Pavement Plan segments	0 lowest Rank → 1 Highest Rank	5%
	Percent of pedestrian infrastructure that is ADA-***non*** compliant	Normalized based on Rank among all Pavement Plan segments	0 lowest Rank → 1 Highest Rank	5%
	With/without bike lane(s)	1: with bike lane; 0: without bike lane	0 or 1	5%
Resident Requests & Violation	Requests per linear mile	Normalized based on Rank among all Pavement Plan segments	0 lowest Rank → 1 Highest Rank	8%
	Number of violations per mile	Normalized based on Rank among all Pavement Plan segments	0 lowest Rank → 1 Highest Rank	3%
School Zone	Distance to the closest school	Distance	> 1000 ft: 0; <= 1000 ft: 0.25; <= 750 feet: 0.50; <= 500 feet: 0.75; <= 250 feet: 1	10%
Traffic Volume	AADT (Annual Average Daily Traffic)	Normalized based on Rank among all Pavement Plan segments	0 lowest Rank → 1 Highest Rank	5%
Benefit/Cost Ratio	Predicted benefit crash reduction divided by cost of repaving/re-marking	Normalized based on Rank among all Pavement Plan segments	0 lowest Rank → 1 Highest Rank	10%
Total				**100%**

35% of the total score comes from pedestrian and bicyclist variables

Review Process

Coordination

- Screening top scoring segments with bike team
- Continuous communication with Asset Management

Safety Study

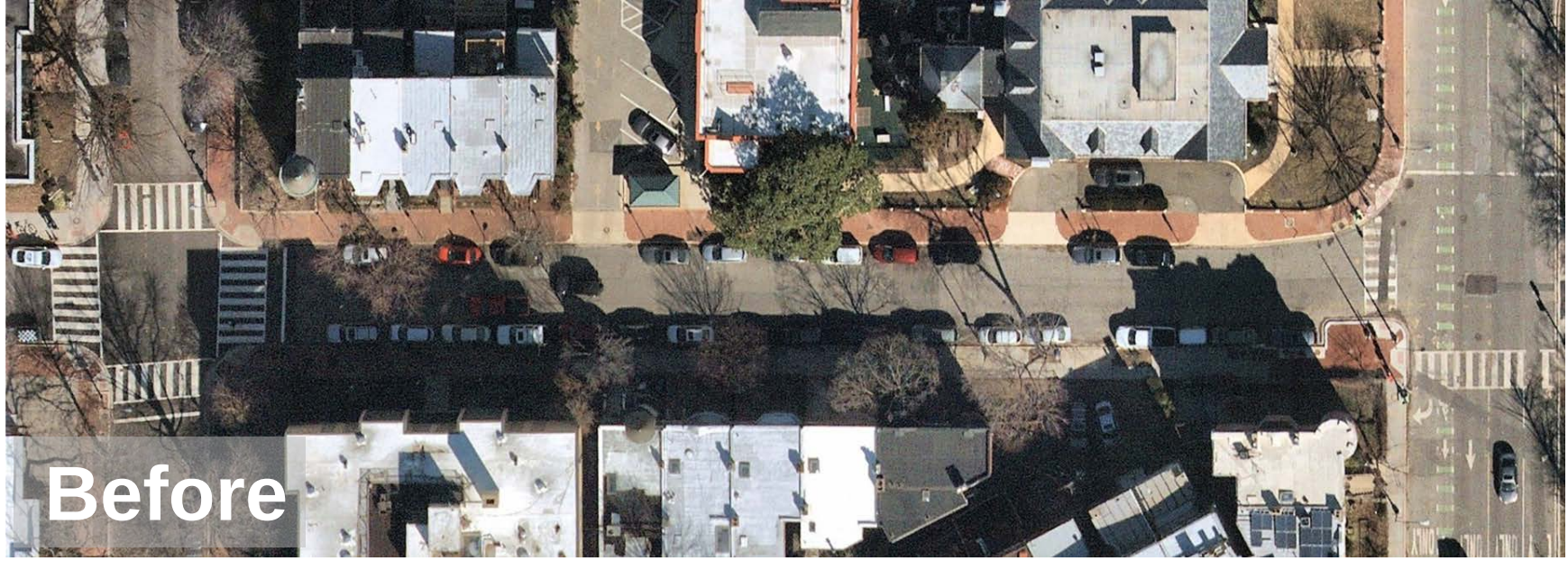
- Intersection and Corridor safety performance
- Emphasis on vulnerable user crashes
- Countermeasure identification

Response

- Marking plans sent to Asset Management resurfacing effort
- Work orders for signing Field Operations Branch
- Traffic Engineering and Signals Department referrals

Annual Timeline

- January-February
  - Prioritization methodology updated
- March
  - Paving plan finalized
  - Top segments selected
  - Screening with bike team
- April-June
  - Safety studies and marking plans begin
  - Conducted in order of paving schedule
- April-September
  - Repaving takes place



District Department of Transportation

Thanks for joining!

- Be on the lookout for an email with:
  - An evaluation survey
  - Meeting materials (with contact information)