

# Tips for Successfully Navigating Complete Streets Projects

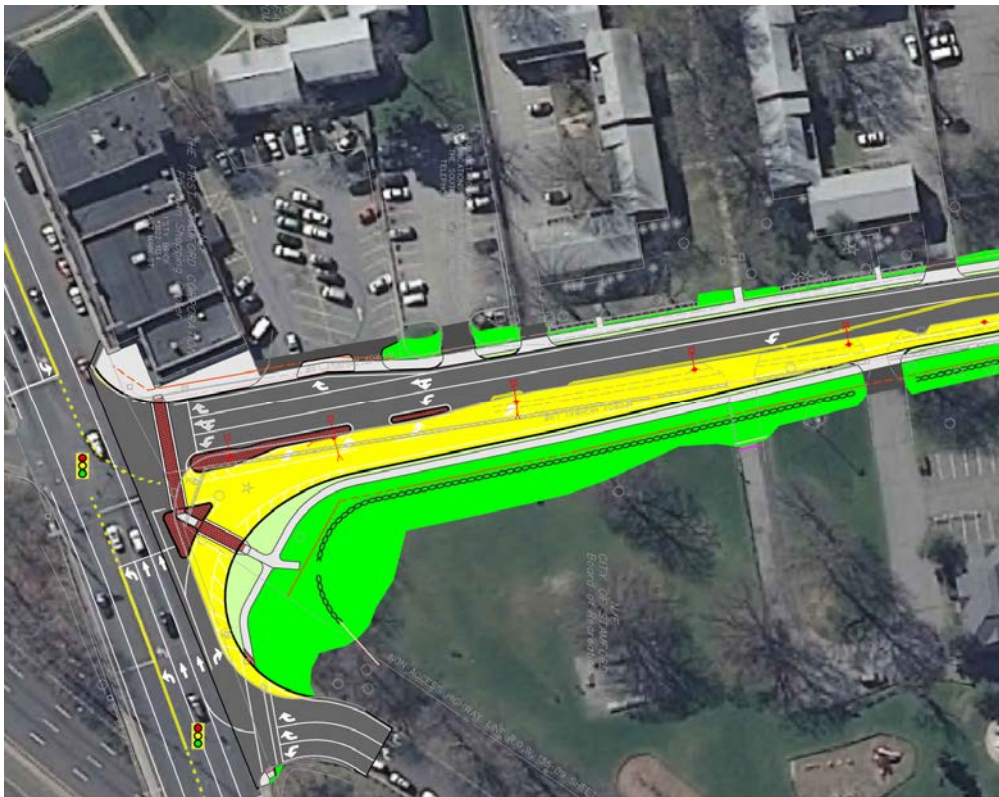
## Panel Members:

Marissa Pfaffinger, P.E. – CTDOT – Highway Management Unit

Hugh Hayward, P.E. – CTDOT – Local Roads – LOTCIP

Michael Cherpak, P.E. – CTDOT – State Highway Design





Source: New Canaan Advertiser – Aaron Marsh

Michael Cherpak, P.E. – CTDOT – State Highway Design

# Tips for Successfully Navigating Complete Streets Projects

a focus on

## Initiating State Projects

Marissa Pfaffinger, P.E. – CTDOT



# Agenda

Introductions and Organization  
Overview of State-Initiated Projects  
Questions and Answers

## Slide 4

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**PM1**

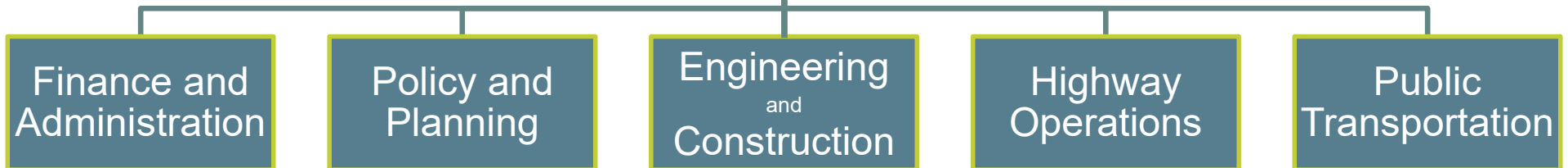
Pfaffinger, Marissa, 10/26/2020

# Introductions and Organization

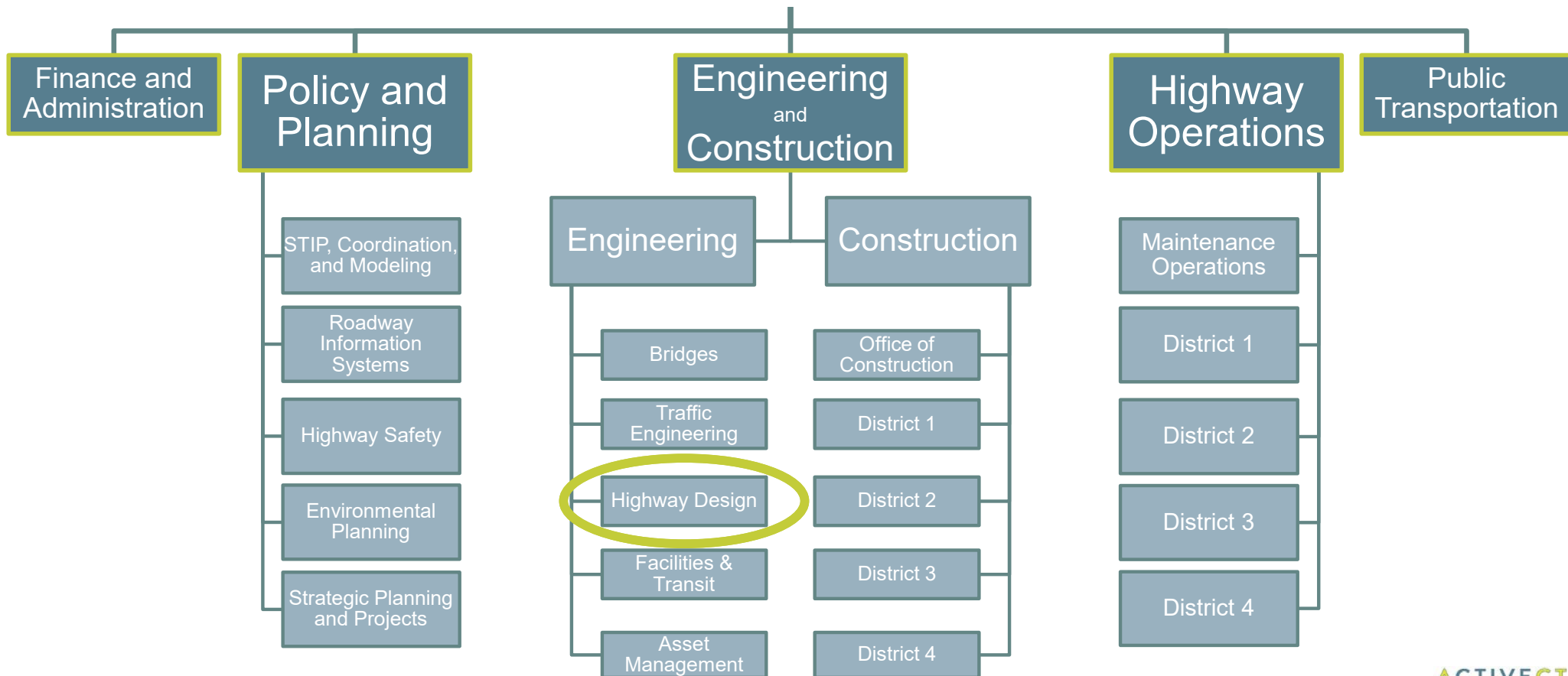
**Marissa Pfaffinger, P.E.**  
Transportation Supervising Engineer



# Introductions and Organization



# Introductions and Organization





# Introductions and Organization

## Division of Highway Design

### Consultant Design Unit

Major Projects  
State Highways  
Local Roads

### State Design Unit

Capital Improvement Projects

## Highway Management Unit (HMU)

Identify, Scope, Initiate Projects



## Highway Design Projects

Our projects are primarily roadway focused - They are not standalone bridge, traffic signal or pavement rehabilitation projects

- BUT -

Our projects often include those elements (and more!)



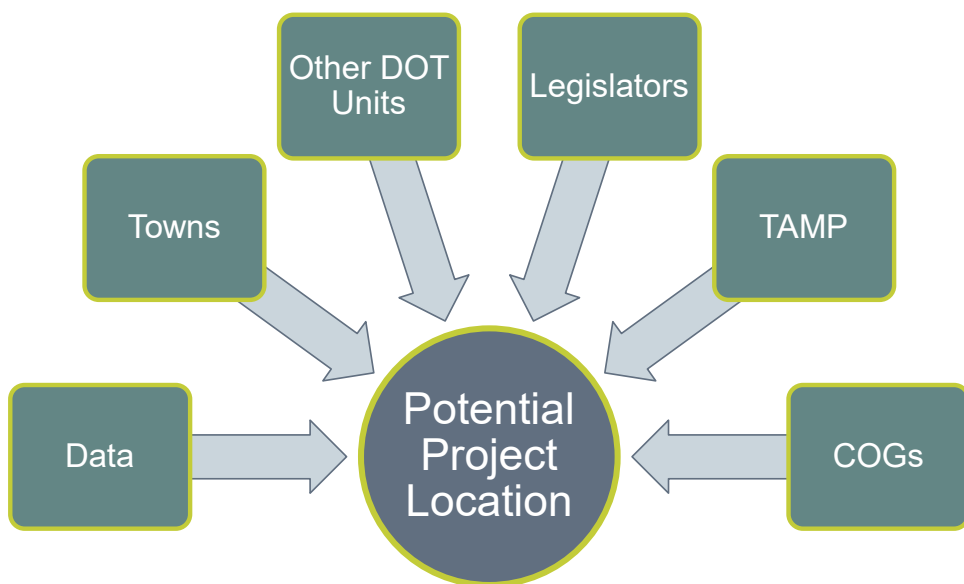
# 1

## How Projects Become Projects

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*"Hello, there is a problem with ... can you do anything about it?"*

# How Projects Become Projects



## Step 1: Notification and Request

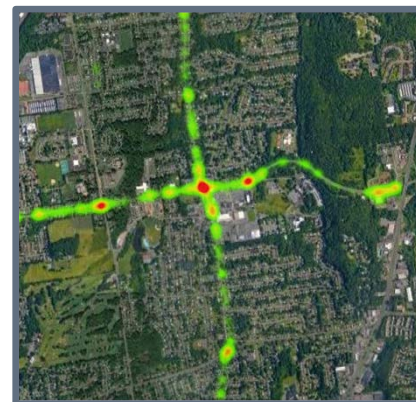
- Existing DOT Plans and Information
  - Corridor Studies/Planning Documents
  - Data-Driven Analysis
    - High-Frequency Crash Locations
    - Recurring Congestion Corridors
    - Condition-Based Improvements
    - Sub-Standard Geometrics
- Councils of Government (COGs)
- Legislator Requests
- Town Requests

# How Projects Become Projects

## Step 2: Information Gathering

- Crash History (UCONN Repository)
- Traffic Counts & Congestion Data
- Survey/LiDAR – Existing Ground Information
- Property Lines/Available ROW
- Coordination – Other DOT Bureaus
- Research – Town and Regional Plans
- Field Review

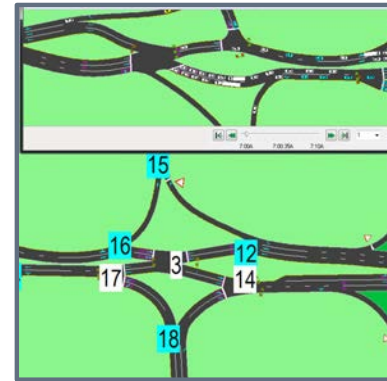
Goal: Define Deficiencies and Clarify Intent  
(what are we trying to solve – and why)



# How Projects Become Projects

## Step 3: Scoping – Develop Alternatives

- Identify - Data-Driven Solutions, Best Practices
- Simulate/Model Existing and Future Conditions
- Internal Coordination within DOT
  - Bureau of Policy and Planning
    - Bicycle and Pedestrian Needs Travel Assessment Form
    - Early Resource Screening
  - Office of Rights-of-Way (ROW)
- Conduct Outreach – Town and Stakeholder
  - Gauge Public Support
- Develop Cost Estimates
- Internal Vetting and Review
- Define Preferred Alternative



Source: <https://company.ptvgroup.com/en/resources/newsroom>

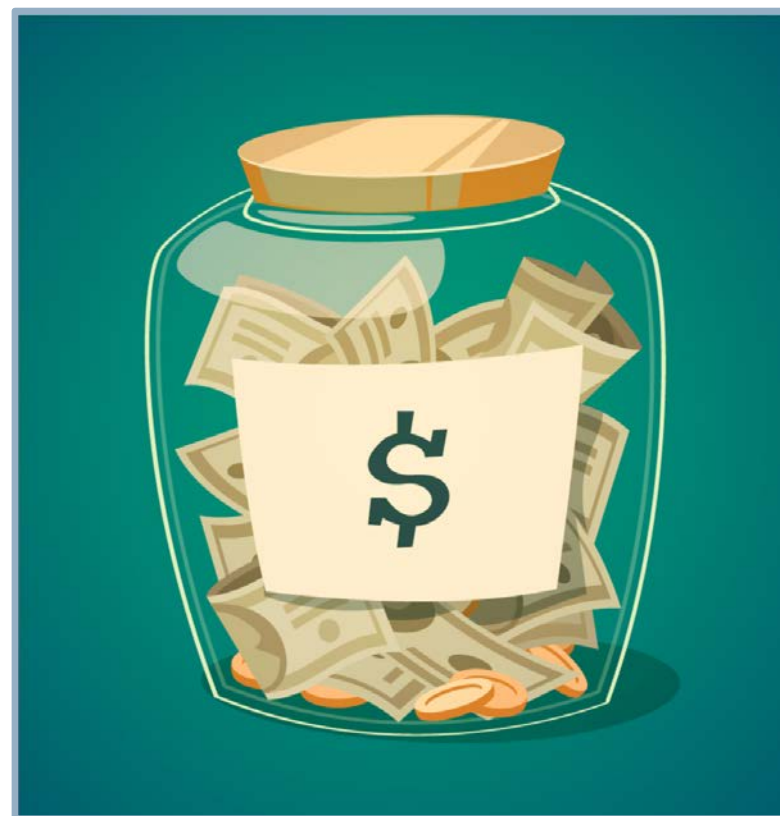




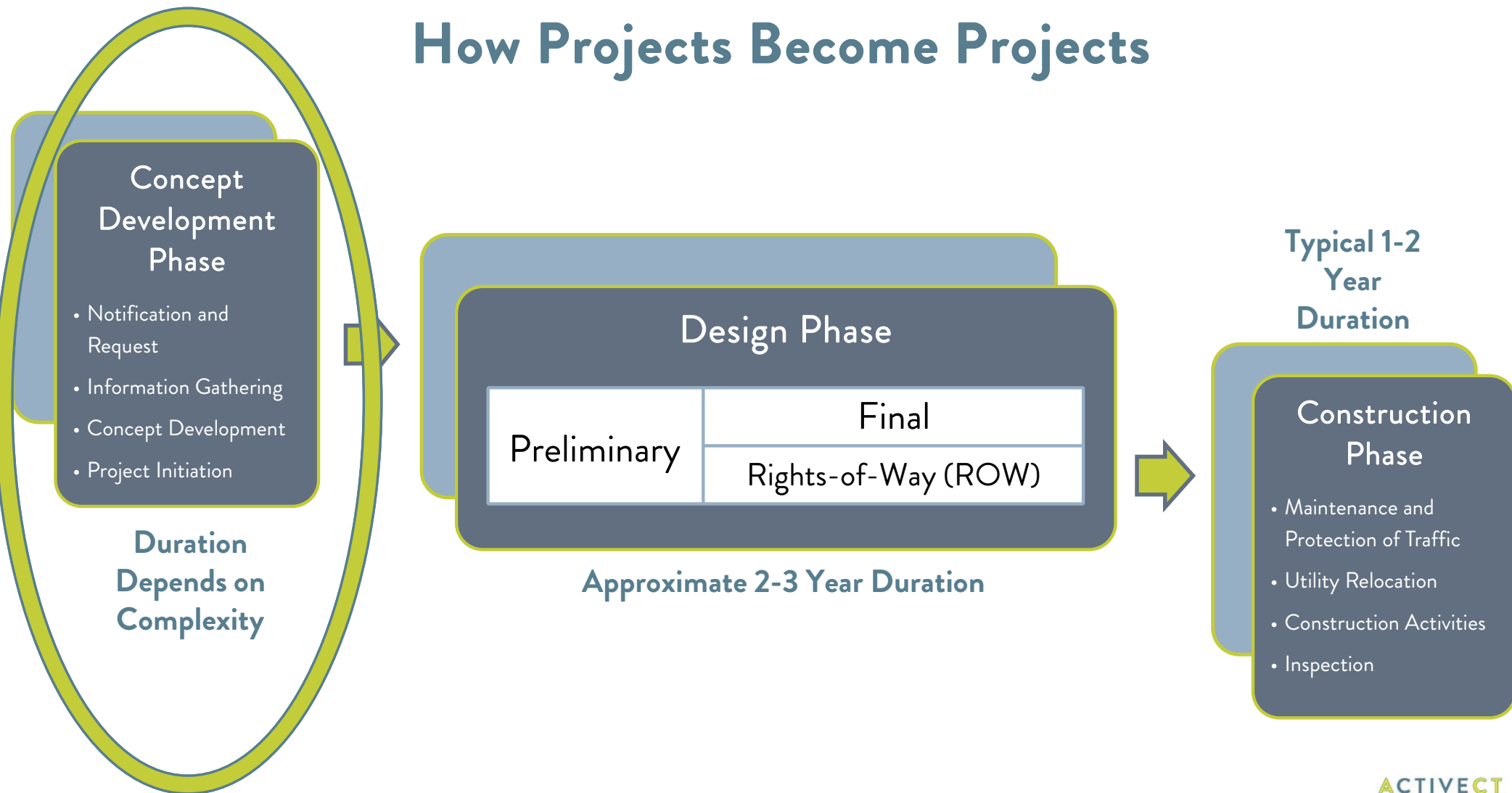
# How Projects Become Projects

## Step 4: Project Initiation

- Prepare Final Scoping Report
  - Report Documents Background, Alternatives Analysis, Coordination, Decision Making, Etc.
- Proposed Project Information (PPI) Form Completed – Includes Estimate, Schedule, and Critical Location Information for Funding
- Bureau of Finance and Administration Reviews Eligibility Requirements for Various Funding Sources – State and Federal – Programs Project
- Once Funding is Available, Design Phase Begins!



# How Projects Become Projects



# 2

## How Can We Better Insure a Complete Streets Approach?

*"We are developing solutions. Are we considering all users?"*

# How Can We Better Insure a Complete Streets Approach

Information Gathering



Developing Alternatives



Preferred Alternative

“Taking into consideration various data, input, and experiences, alternatives are discussed internally and publicly and the one that best meets the project goals is selected” - Texas DOT

In “our world”, project goals and their justification are defined as

**PURPOSE AND NEED**

“Decision makers require justification to support the expenditure of taxpayers’ money and the environmental impacts involved.” - FHWA

# How Can We Better Insure a Complete Streets Approach

## What is a *PURPOSE AND NEED* Statement

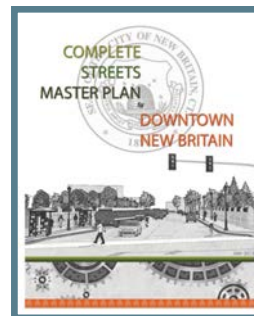
“Purpose” can be defined as the reason to conduct the project

e.g.: The *purpose* of the project is to reduce congestion and improve mobility at the intersection of Town Road and Main Street

“Need” can be defined as the identification of deficiencies of the project supported by facts or data

e.g.: This project is *needed* because the capacity of the intersection of Town Road and Main Street is inadequate to meet current and future traffic volumes, resulting in congestion, reduced mobility and Level of Service D on this stretch of highway.

A Purpose and Need can consist of both primary and secondary goals. If the primary goal of a project isn't directly bicycle or pedestrian related, additional information is vital to justify that secondary need.



# How Can We Better Insure a Complete Streets Approach

## IMPORTANCE OF *PURPOSE AND NEED* STATEMENT

A Project May...

Change Design Teams or Have New Decision Makers  
Uncover Unexpected Expenses or Constraints  
Get Delayed  
Compete for Funding  
Be Adjacent to Another Identified Need

How Can We Better Insure Complete Streets Components Remain in the Project Scope?

When justified, include it in the Purpose and Need!



# How We Better Insure a Complete Streets Approach

## Example Concept – Bishop's Corner, West Hartford

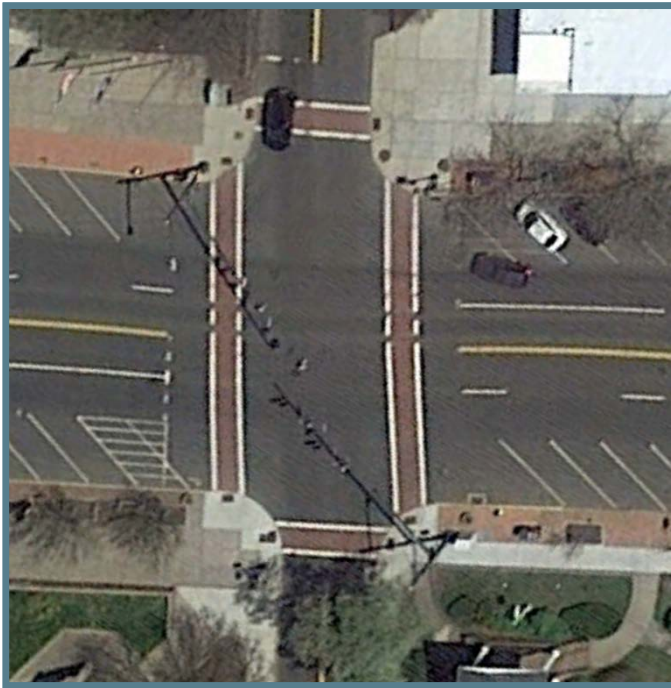


So what's the Purpose and Need of this Project?

The purpose of this project is to make the intersection more accessible for pedestrians without degrading vehicular operations. It is needed because the highly congested intersection leads to aggressive driver behavior and hinders the walkability of the area. Specifically, the channelized right-turn lanes on each approach do not have pedestrian actuations when crossing, and the islands themselves are not geometrically adequate.

# How We Better Insure a Complete Streets Approach

## Example Project – Main Street, Middletown

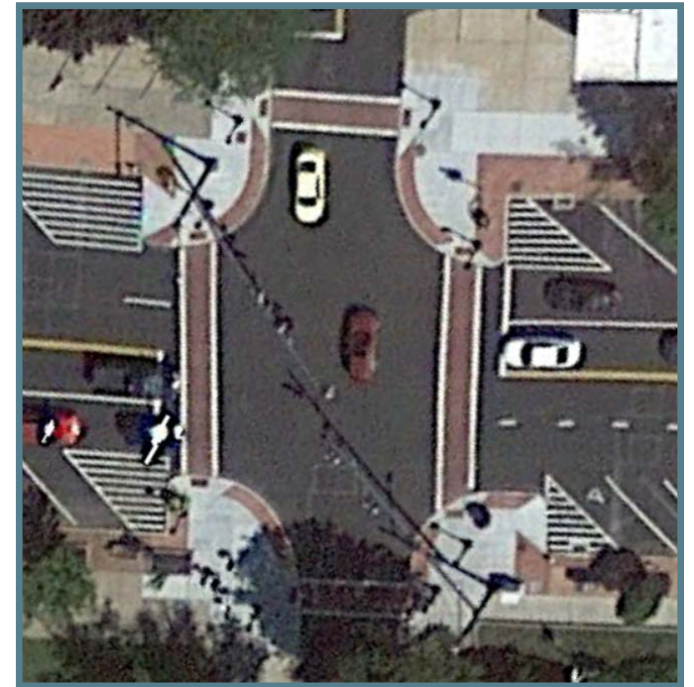


2016

Route 9 congestion reduction is the primary goal, but change in traffic patterns will also effect Main Street

Even though Route 9 alternatives are being developed, City and all users are already realizing benefits of the break-out project

Reduced crossing distance, protection for parked and pedestrian, efficient signal operation



Present

# 3

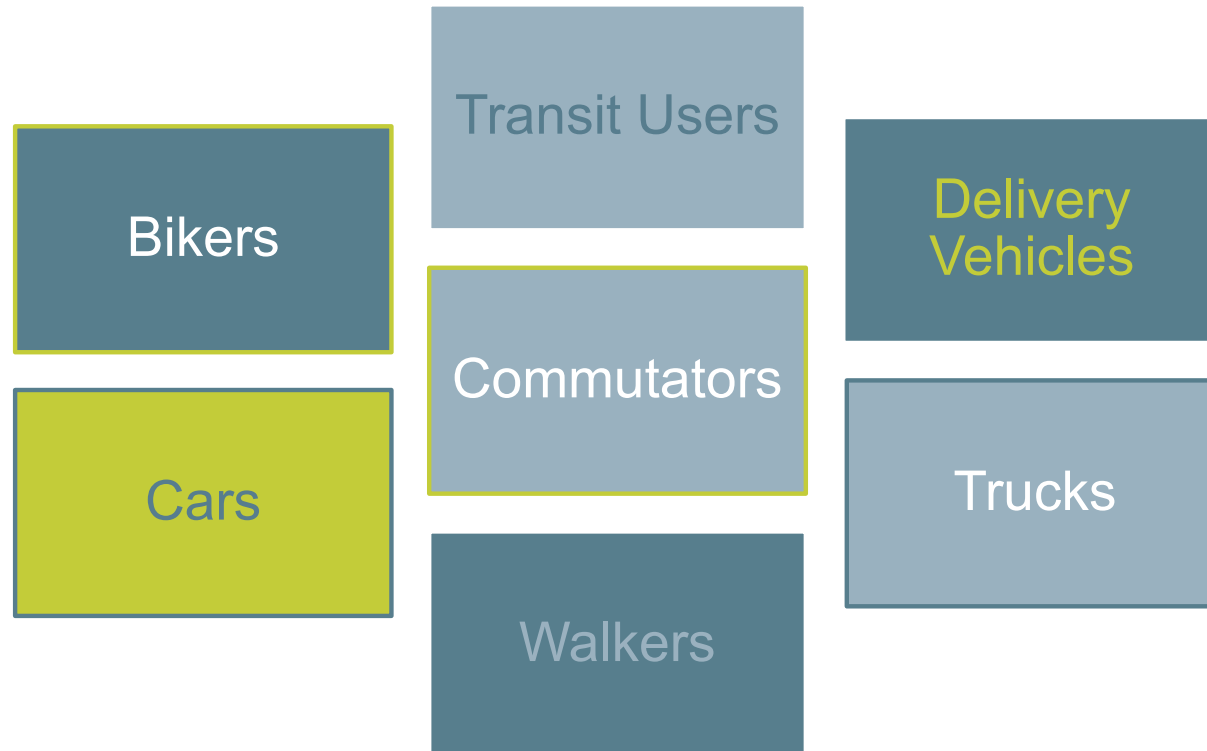
## Finding Balance Between Needs

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*“Those are great solutions, but can you also include...”*

# Finding Balance Between Needs

Not Only Are There Many Needs to Consider,  
Sometimes They May Conflict



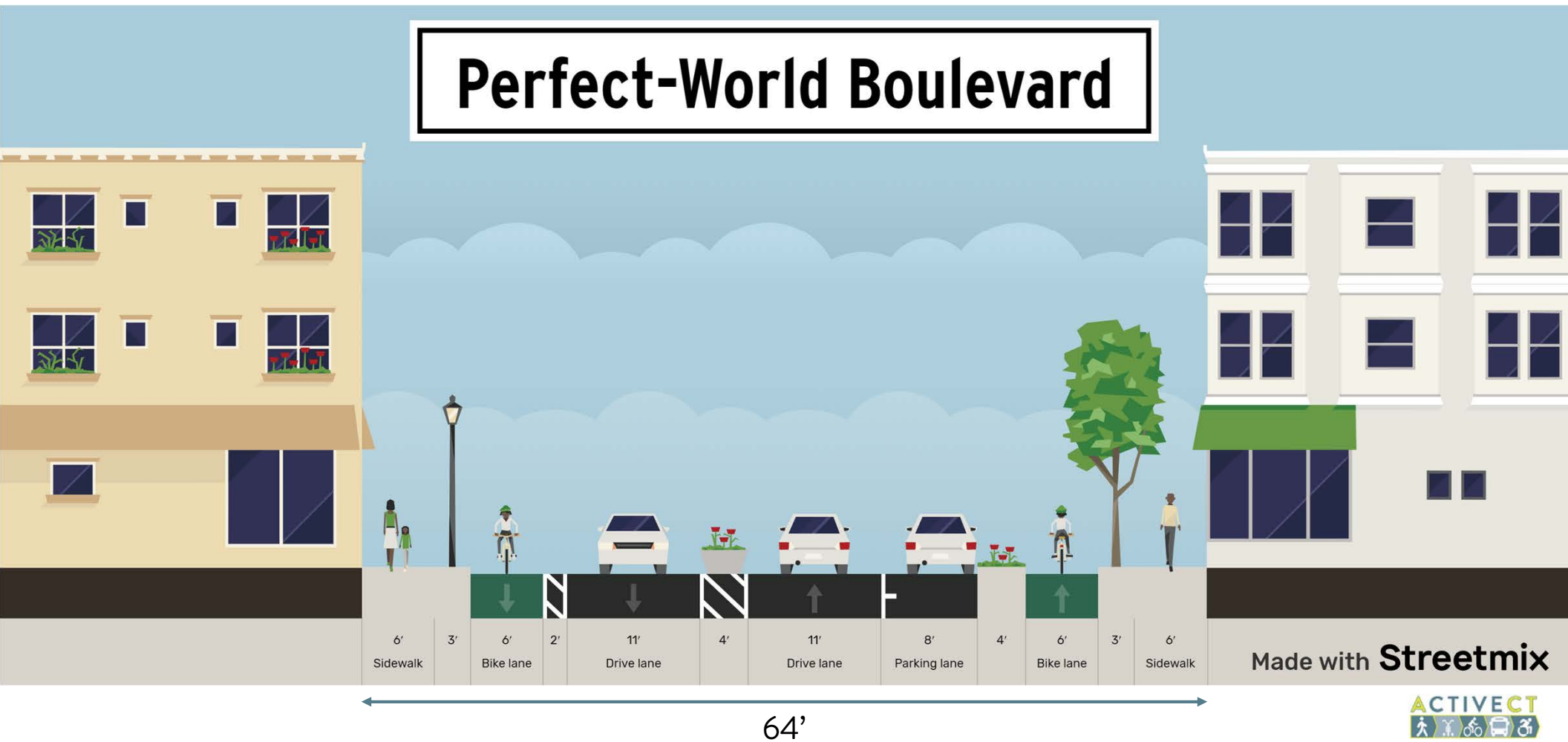
# Finding Balance Between Needs

Not Only Are There Many Needs to Consider,  
Sometimes They May Conflict

Staying in Budget	Walkability	Crash Reduction	Parking
Congestion Relief	Bicycle Safety	Access to Businesses	ROW Impact
Facility Condition	Transit Access	Pedestrian Amenities	Environmental Impacts

# Finding Balance Between Needs

## Perfect-World Boulevard





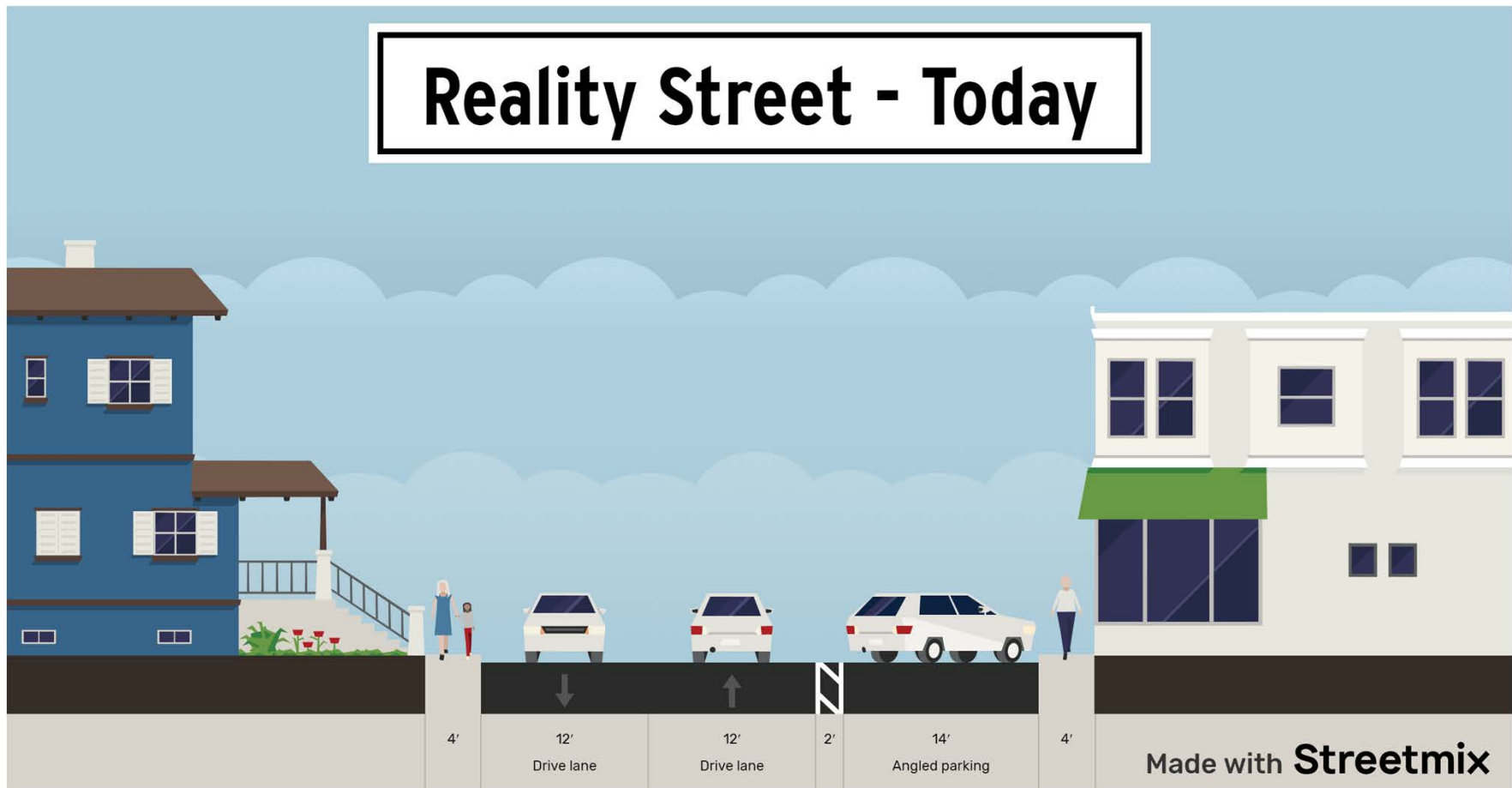
# Finding Balance Between Needs



Route 222 Thomaston

# Finding Balance Between Needs

## Reality Street - Today



# Finding Balance Between Needs

## Reality Street - Possible



# Finding Balance Between Needs

## How Do We Achieve Balance?

Must Understand Constraints and Be Able to Work Within Them

- Roadway Classification – No Pedestrians on Interstates  
*Can we identify alternative paths such as parallel routes or shared use paths?*
- High Speed Roadways or Roadway with High Volumes – May Limit Bike Facilities  
*Can we include wide shoulders to accommodate advanced bicyclists or widen sidewalks?*
- Funding Type Restriction – Sometimes \$\$ it is Allocated for Specific Reasons  
*We may not be able to include features in a specific project, but can we accommodate (or at least not preclude) future improvements?*
- Right of Way/Utilities/Environmental Impacts? -> Drive Up Project Cost and Extend Design Time  
*Understand the difference between a spot improvement (more flexibility) vs. a corridor project (likely more constraints) - Right-Sizing the facility requires dialog and comes back to Purpose and Need*

# Finding Balance Between Needs

## Bike Facility Selection Matrix - Draft

Table 2: Bike Facility Selection Summary Matrix						
Traffic Volume (ADT)	0-5,000	5,000-10,000	10,000-15,000	15,000-20,000	20,000-25,000	25,000+
Shared Roadway	Recommended	Acceptable				
Bike Lane	Recommended		Acceptable			
Buffered Bike Lane	Exceeds Recomm.	Recommended			Acceptable	
Separated Bike Lane	Exceeds Recommendation			Recommended		
Sidepath	Exceeds Recommendation		Recommended			
85 <sup>th</sup> Percentile Traffic Speed (mph)	0-25	26-30	31-35	36-40	41-45	46+
Shared Roadway	Recommended		Acceptable	Provisional*		
Bike Lane	Recommended			Acceptable	Provisional*	
Buffered Bike Lane	Exceeds Recommendation		Recommended		Acceptable	Provisional*
Separated Bike Lane	Exceeds Recommendation			Recommended		
Sidepath	Exceeds Recommendation		Recommended			

Source: CTDOT Bicycle Facility Selection and Design Guide 2020



# Finding Balance Between Needs

Even if the answer is no...



Due diligence is done to explore every avenue and document findings and decisions

“Buffered Bike Lanes Were Explored, but Ultimately a Standard Bike Lane is Recommended for the Project.

- Vehicular Speeds are Below Threshold for Additional Separation
- ROW Acquisitions along 25 parcels would be required at estimated cost of \$XX,XXX.
- Larger Roadway Footprint Encroaches on Protected Wetland”





# Finding Balance Between Needs



## The Real Challenge

How much can we pack into a project while balancing all factors such as main purpose, secondary purposes, ROW, utilities, permitting...

...while staying within budget.

# 4

## Final Take-Aways

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"We're happy with what we put forward. In the future we hope to..."

# Final Take-Aways

## How Can Municipalities Help?

- Develop and Publish Local Plans
  - Have You Defined Your Complete Streets Goals?
  - Are There Elements/Uses/Areas You Don't Support?
  - Does Your Zoning Reflect Your Goals?
  - Is the Information Easily Accessible!?!?
- Regional Awareness
  - What Happens At Your Borders?
  - Are There Shared Goals Between Town Neighbors?
  - Does Your COG Have a Plan? Did/Will You Participate?
- Internal Continuity
  - Does Your LTA Know Your Town Engineer's Priorities? (for example)
  - Do Your Policies Bridge Administrations? Do You Want Them To?



# Final Take-Aways

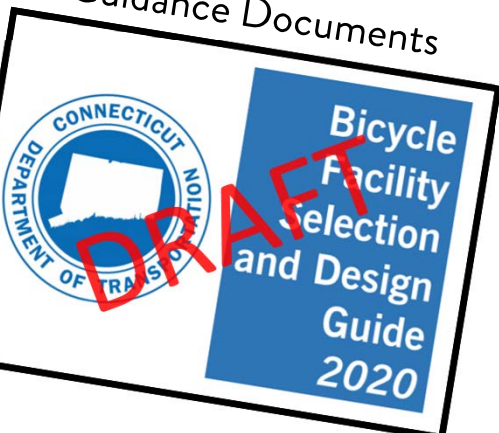
## What We Are Doing to Improve

Early Public Outreach



Goal is to Instill an Environment in which Designs are Sensitive To and Encompass the Needs of All Users

Better Guidance Documents

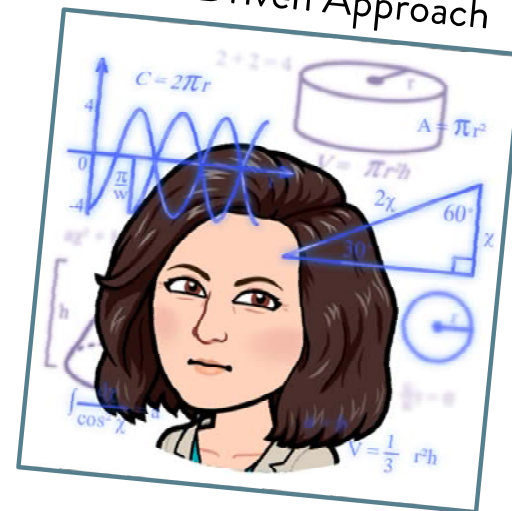


Balance Different Needs



Improved Coordination

Data Driven Approach



# Any Questions

