Whitney Avenue

Major Corridors Project
Public Meeting #3

City of New Haven
Justin Elicker, Mayor
Board of Alders

What we are going to talk about

- Process so far
- Review of concept presented on 10/21
- Traffic analysis
- Addressing traffic calming issues on side streets
- Outstanding design questions
- Schedule
- Discussion

https://www.newhavenct.gov/gov/depts/engineering/complete_streets/wavec.htm

Where we have been

Multi-year Process

- ERCMT
- SeeClickFix
- Meetings with Alders
- Community Meetings
  - 10/21/2021 Concept Design
- Comments/Emails/Feedback

- $2.7M LOTCIP from State of CT

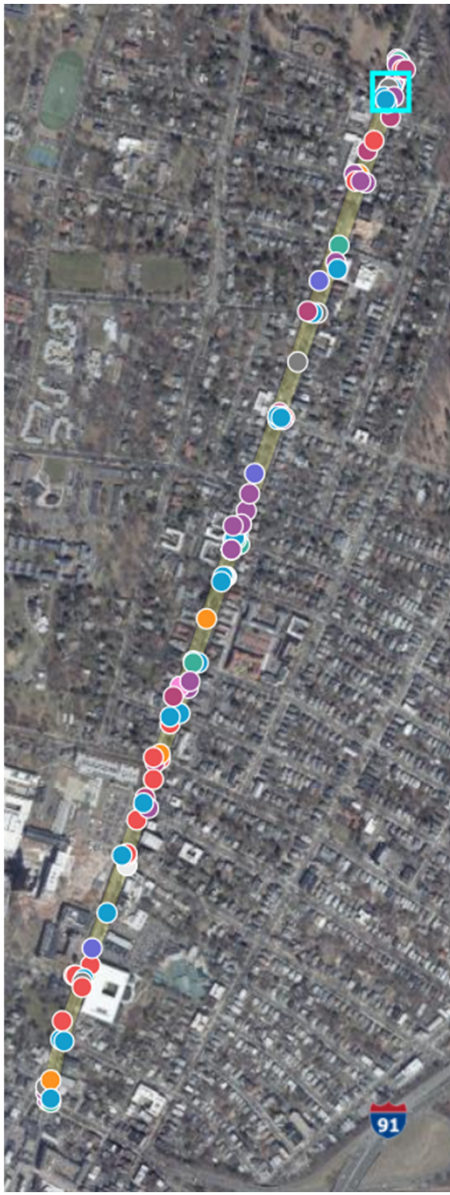
Thank you for earlier feedback!

Public Meetings 2/10/2021 + 10/21/2021

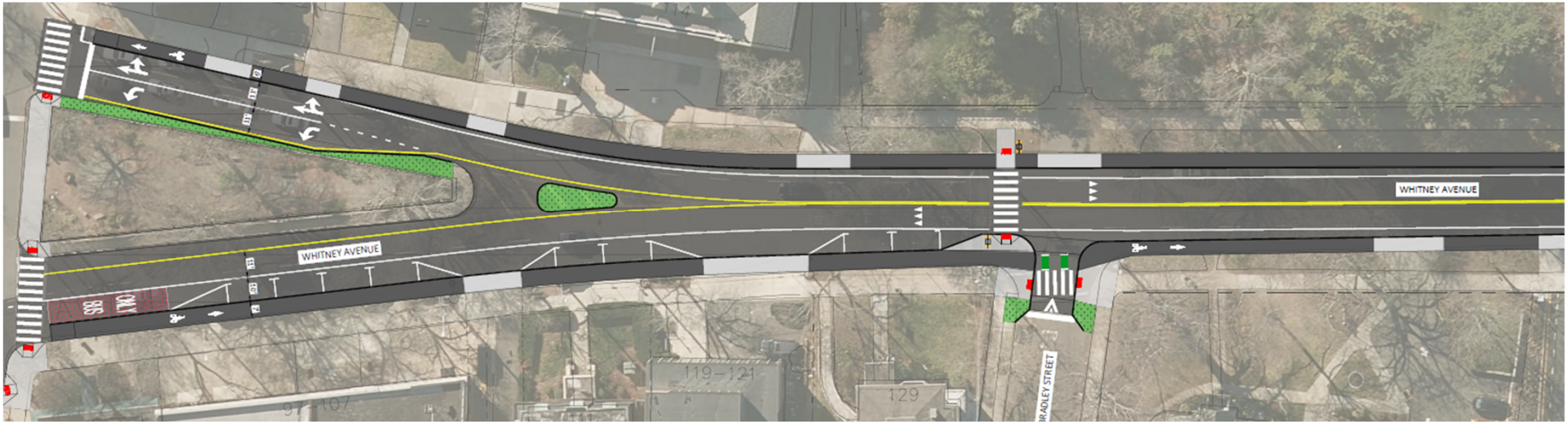
- Over 50 attendees each meeting
- 110 Comments
- 1,256 Likes
- Emails/other feedback

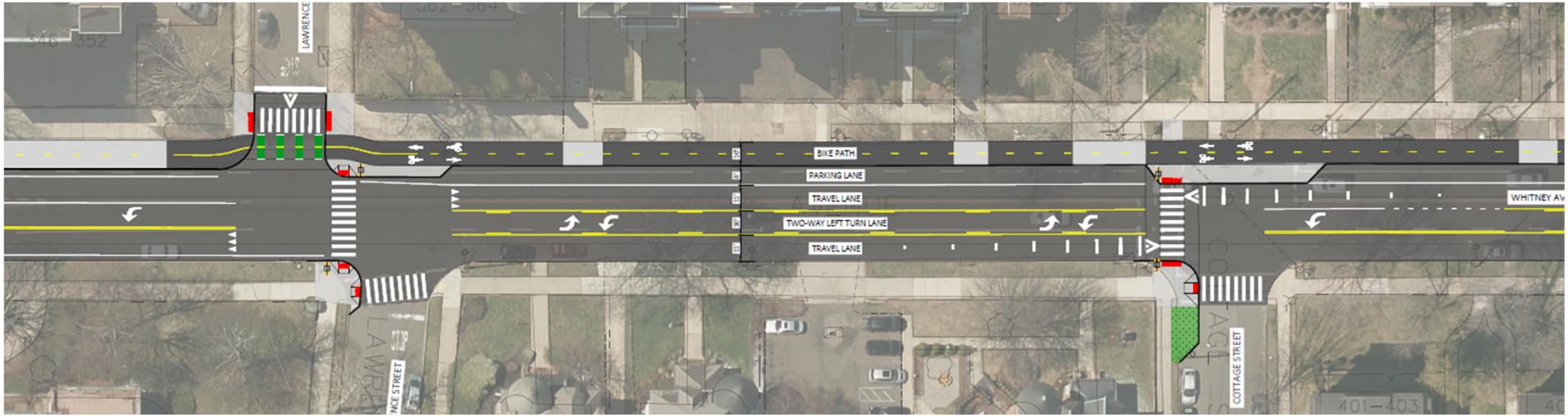
Themes from Feedback

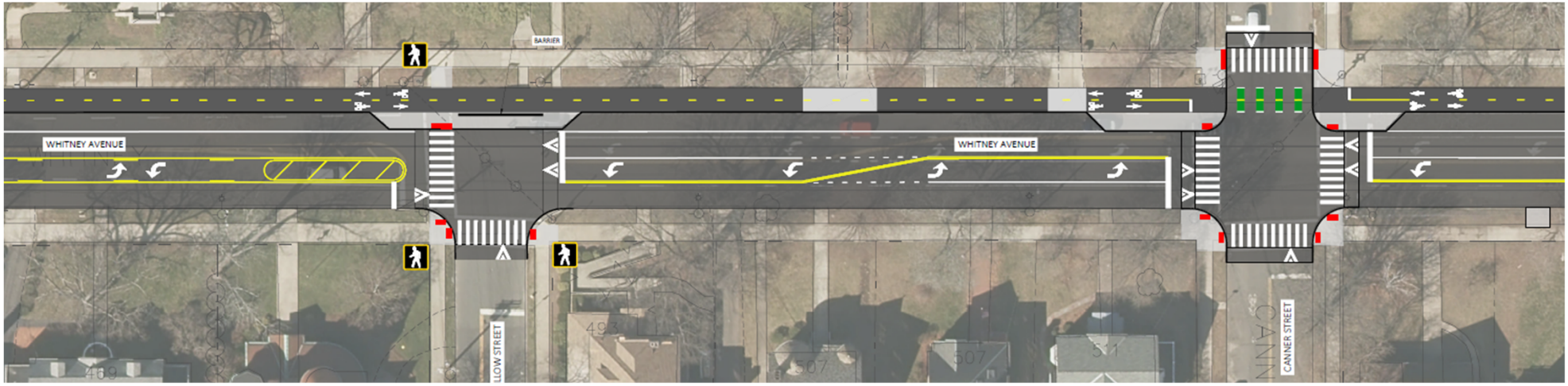
- Improve pedestrian crossings
- Slow vehicle speeds
- Narrow roadway
- Provide protected bike lanes
- Address neighboring streets for cut-through traffic
- Ensure Whitney Ave motor vehicle traffic can move efficiently

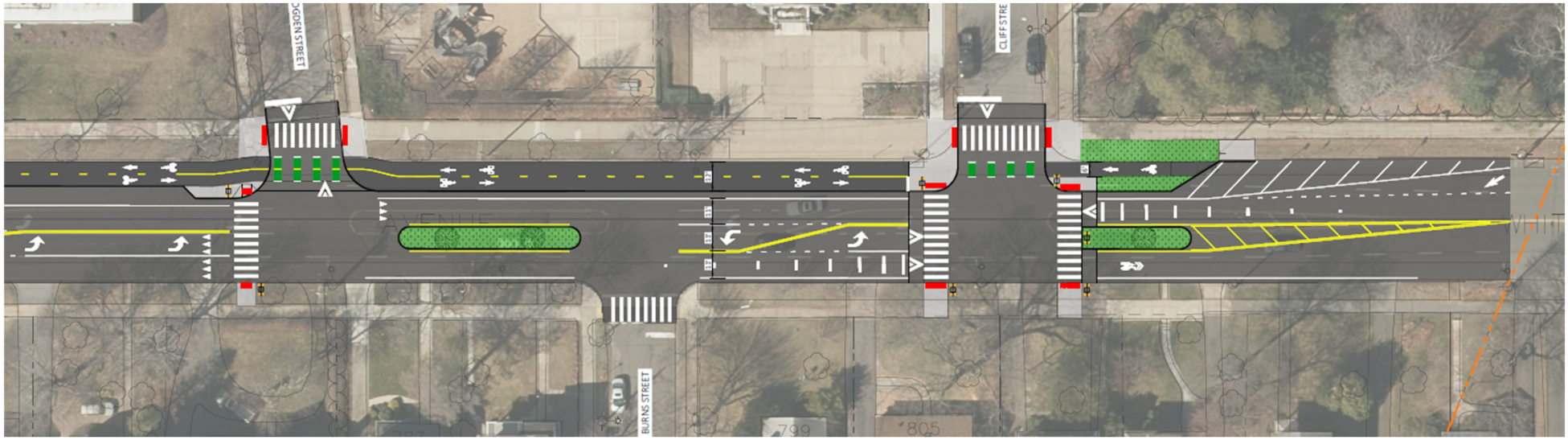


Review – 10/21/2021 Concept

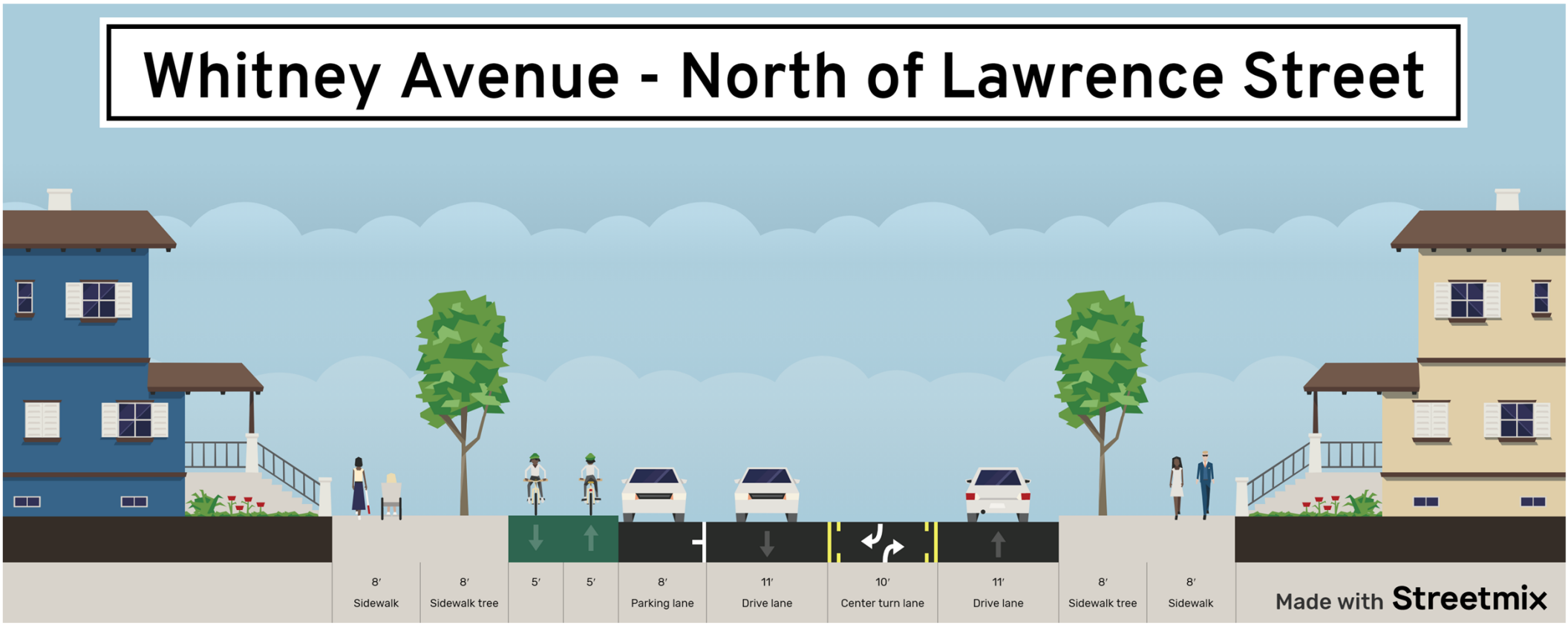

WHITNEY AVENUE
WHITNEY AVENUE
BRADLEY STREET


LAWRENCE
BIKE PATH
PARKING LANE
TRAVEL LANE
TWO-WAY LEFT TURN LANE
TRAVEL LANE
WHITNEY AV
COTTAGE STREET

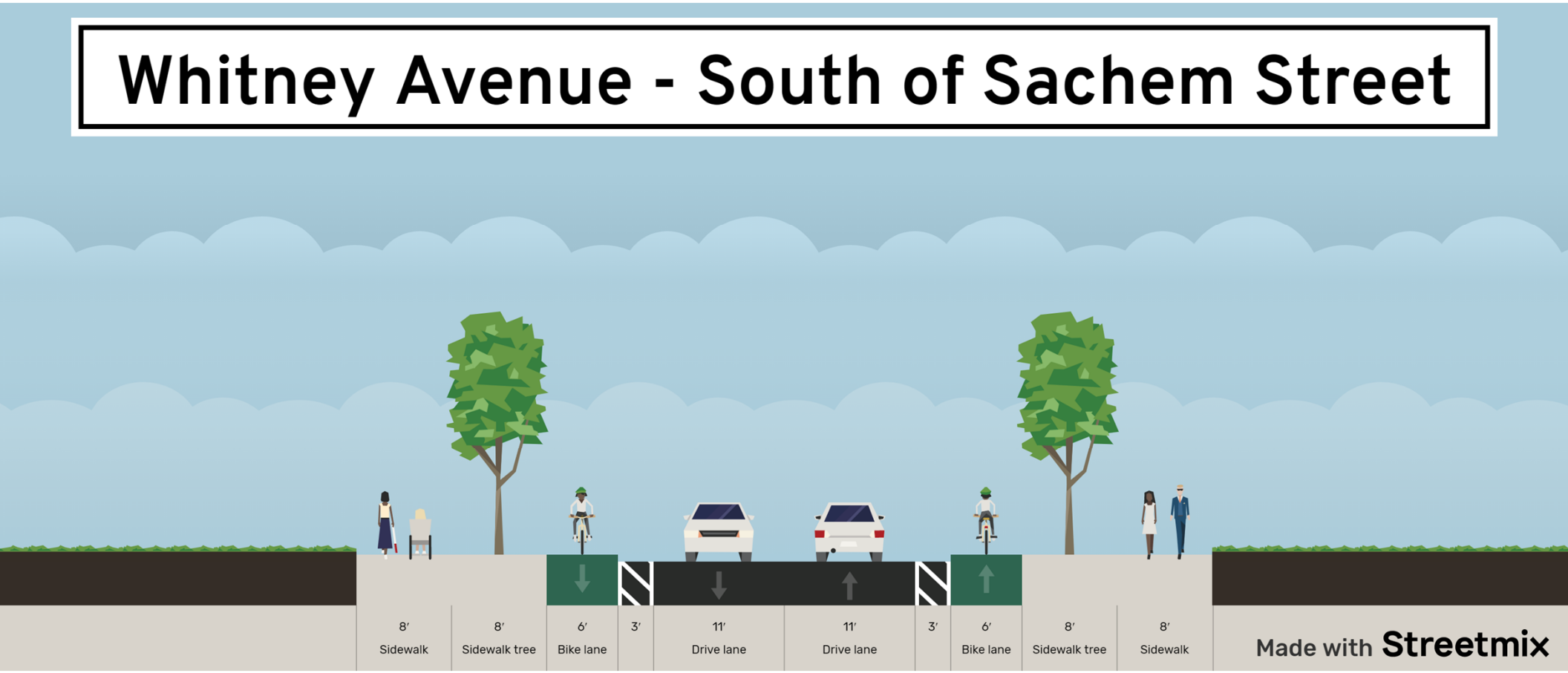

BARRIER
WHITNEY AVENUE
WHITNEY AVENUE
CANNER STREET


BURNS STREET

Whitney Avenue - North of Lawrence Street



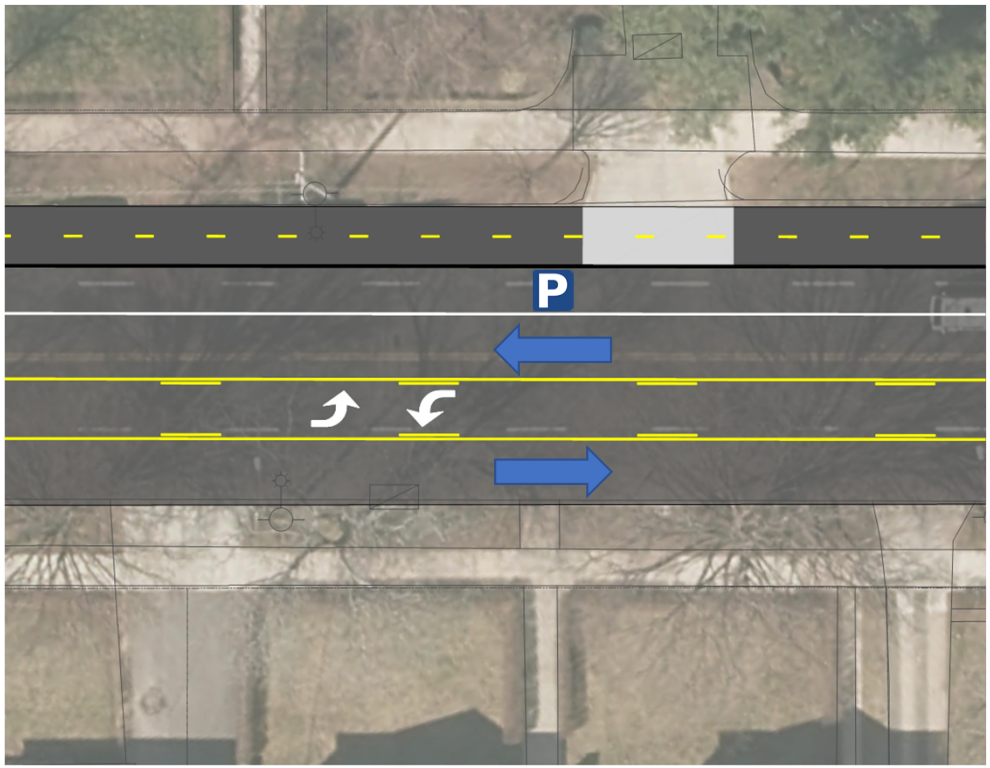
Whitney Avenue - South of Sachem Street



Traffic Analysis

- What exactly is a road diet?
- What are the traffic trends?
- What modeling have you done?
- Isn’t this going to dramatically decrease the function of Whitney for motor vehicles?
- Is a lot of traffic going to go onto the side streets?

What is a Road Diet



Before

Whitney Avenue between Cottage and Linden

After

Benefits of Road Diet

Benefits of Road Diet installations may include:

- Reduction of rear-end and left-turn crashes due to the dedicated left-turn lane.
- Reduced right-angle crashes as side street motorists cross three versus four travel lanes.
- Fewer lanes for pedestrians to cross.
- Opportunity to install pedestrian refuge islands, bicycle lanes, on-street parking, or transit stops.
- Traffic calming and more consistent speeds.
- A more community-focused, Complete Streets environment that better accommodates the needs of all road users.

Source: Federal Highway Administration
https://safety.fhwa.dot.gov/provencountermeasures/road_diets.cfm

Traffic Trends

- Traffic volumes have not been increasing on Whitney
- Volumes generally decrease closer to downtown
- AM inbound and PM outbound are heaviest

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2021 Tue 05-Jan -this report-.........8500
2015 Wed 21-Jan .....................14100
2013 Wed 01-May .....................14400
2009 Wed 11-Mar .....................14900
2006 Mon 22-May .....................15100
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East Rock Road count station

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2021 Mon 25-Jan -this report-.........6800
2018 Thu 01-Feb .....................12700
2015 Wed 21-Jan .....................12800
2009 Wed 18-Mar .....................12100
2006 Wed 26-Jul .....................14100
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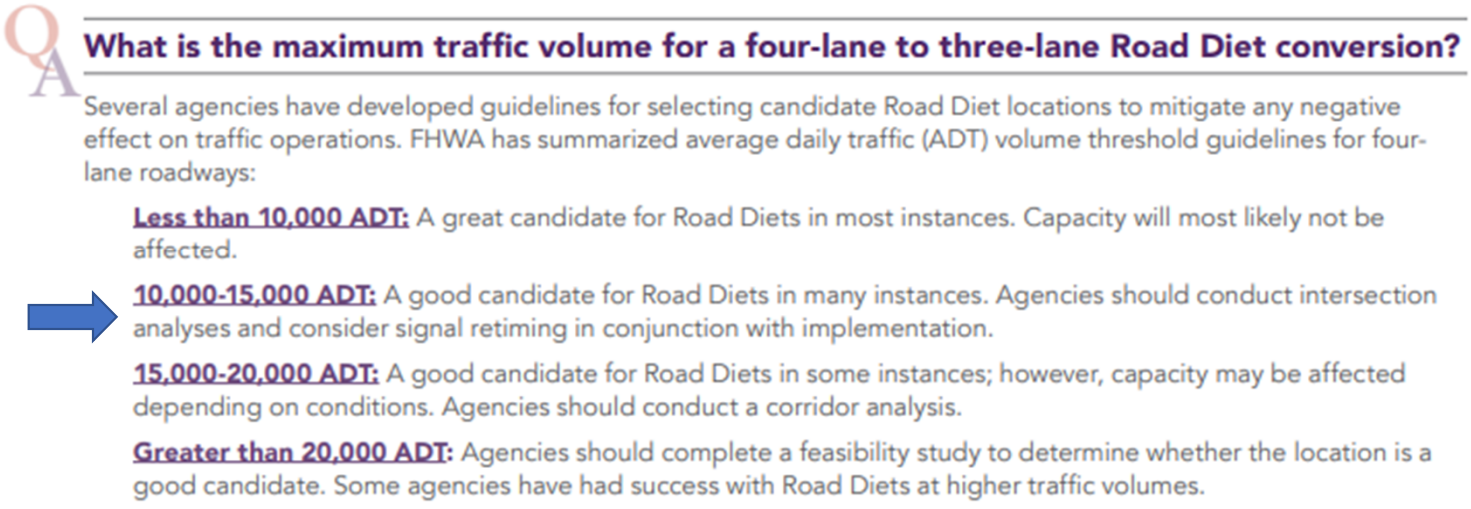
Sachem Street count station

Source: CT DOT Traffic Monitoring Station Viewer

Why Whitney Qualifies

- Overall ADT (11,100 – 14,700) within FHWA guidelines
- Traffic volumes over last ~15 years stagnant or decreasing
- Already functions as 2-lane roadway for most hours of the day
- FHWA guidance: "for road diets with AADTs above approximately 20,000 vehicles, there is an increased likelihood that traffic congestion will increase to the point of diverting traffic to alternative routes."

Source: https://www.fhwa.dot.gov/publications/research/safety/10053/



What is the maximum traffic volume for a four-lane to three-lane Road Diet conversion?

Several agencies have developed guidelines for selecting candidate Road Diet locations to mitigate any negative effect on traffic operations. FHWA has summarized average daily traffic (ADT) volume threshold guidelines for four-lane roadways:

Less than 10,000 ADT: A great candidate for Road Diets in most instances. Capacity will most likely not be affected.

10,000-15,000 ADT: A good candidate for Road Diets in many instances. Agencies should conduct intersection analyses and consider signal retiming in conjunction with implementation.

15,000-20,000 ADT: A good candidate for Road Diets in some instances; however, capacity may be affected depending on conditions. Agencies should conduct a corridor analysis.

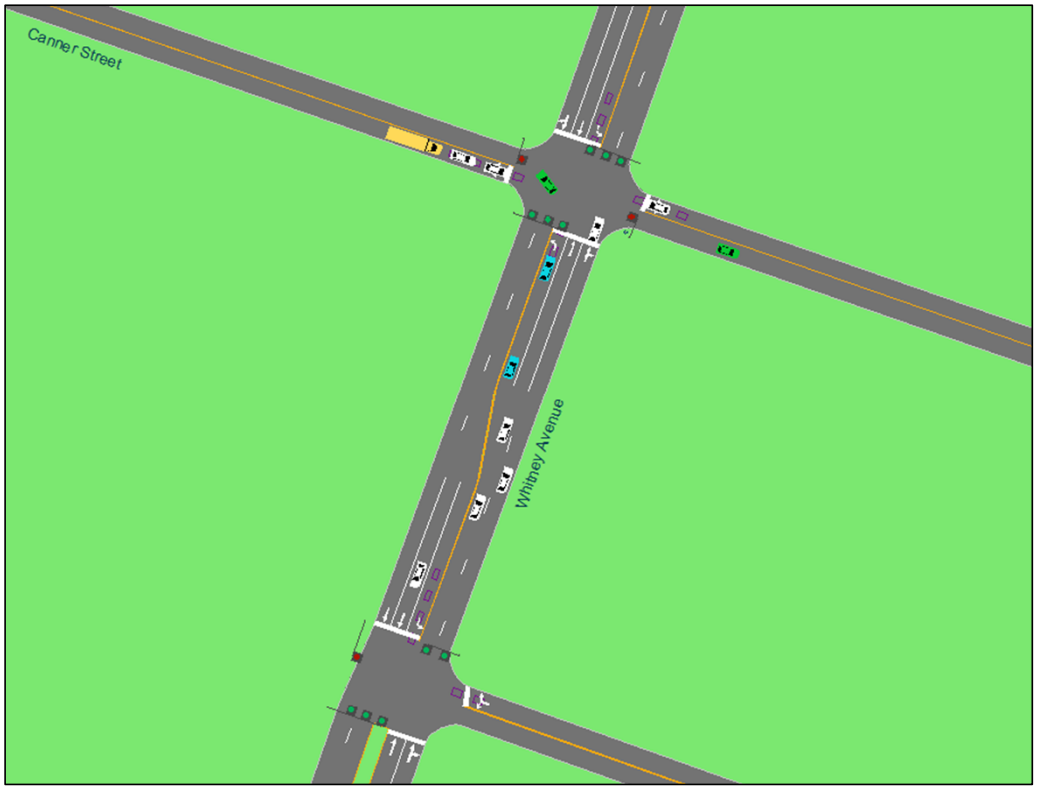
Greater than 20,000 ADT: Agencies should complete a feasibility study to determine whether the location is a good candidate. Some agencies have had success with Road Diets at higher traffic volumes.

Source: https://safety.fhwa.dot.gov/road_diets/resources/pdf/roadDiet_MythBuster.pdf

Synchro Traffic Analysis

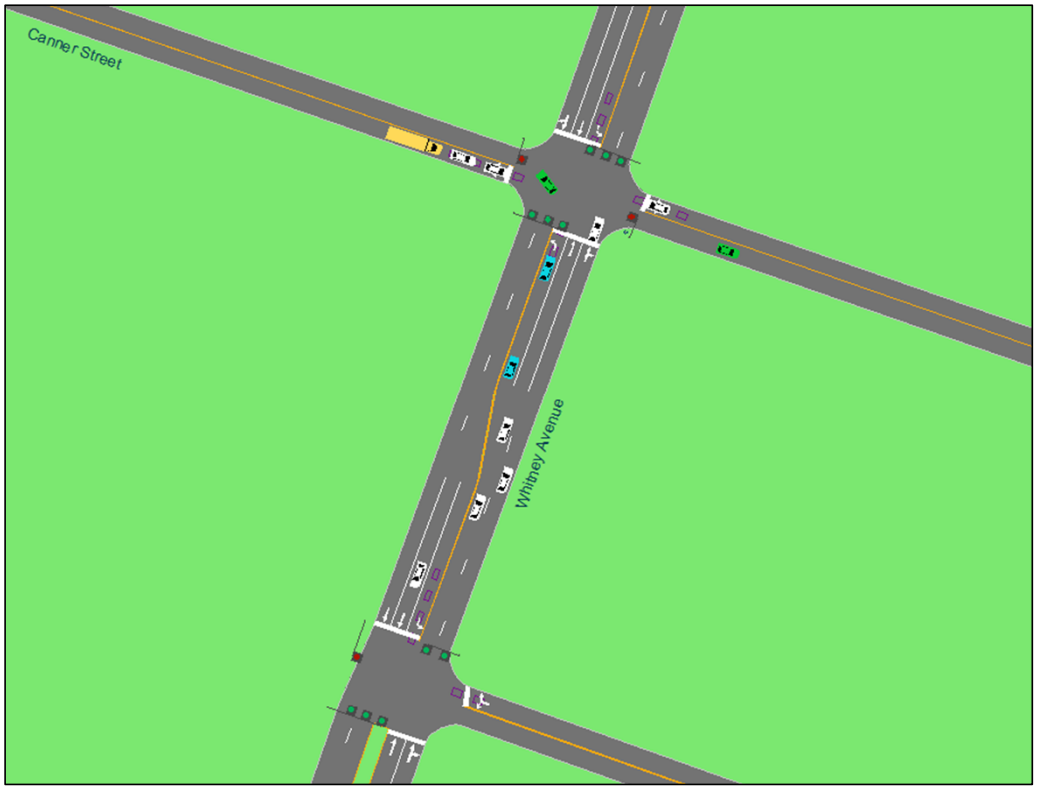
- Numeric model of all intersections of the corridor at peak hour
- Inputs: lane configuration, vehicle volumes, signal timing, signal coordination, pedestrians

- Provides a “Level of Service” per intersection
- LOS A-D common + acceptable in urban environments



Synchro Traffic Analysis

- Existing vs. Proposed
- Analyze multiple scenarios
  - No Build conditions
  - Proposed 2023
    (new design, pre-pandemic traffic, adjusted signal timing)
  - No Build 2040
    (existing lanes, 10% increase in traffic - unlikely)
  - Proposed 2040
    (new design, 10% increase in traffic - unlikely)

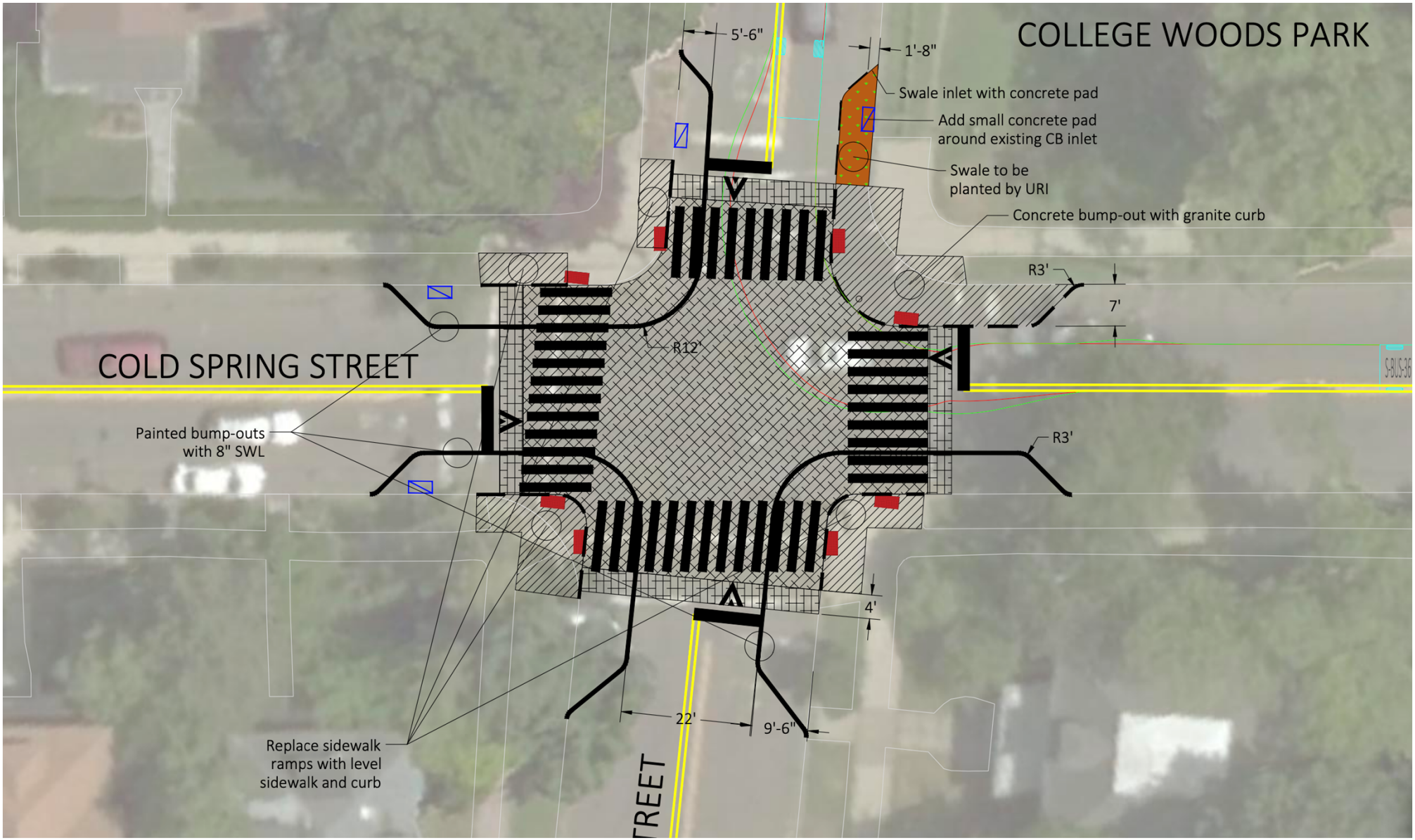


Traffic Analysis Results

	AM Peak Hour				PM Peak Hour			
	No Build Present Day	Proposed 2023	No Build 2040	Proposed 2040	No Build Present Day	Proposed 2023	No Build 2040	Proposed 2040
Temple Street	B	B	B	B	B	B	B	B
Trumbull Street	B	B	B	B	B	B	B	B
Sachem Street	B	C	B	C	C	C	C	C
Humphrey Street	C	C	C	C	E	D	E	E
Edwards Street	C	D	C	E	C	C	C	C
Cottage Street	A	A	A	A	A	A	A	A
Willow Street	A	B	A	B	A	B	A	B
Canner Street	C	C	C	C	B	C	B	C
Huntington Street	B	C	B	C	B	B	B	B
East Rock Road	B	C	B	C	C	C	C	D

Addressing Side Streets

- FHWA design guidance on diversion
- ***There are existing traffic calming concerns and we want to address them***
- Methods:
  - Speed Humps
  - Raised Intersections
  - Adjust Curb Radius
  - Speed Radar Signs

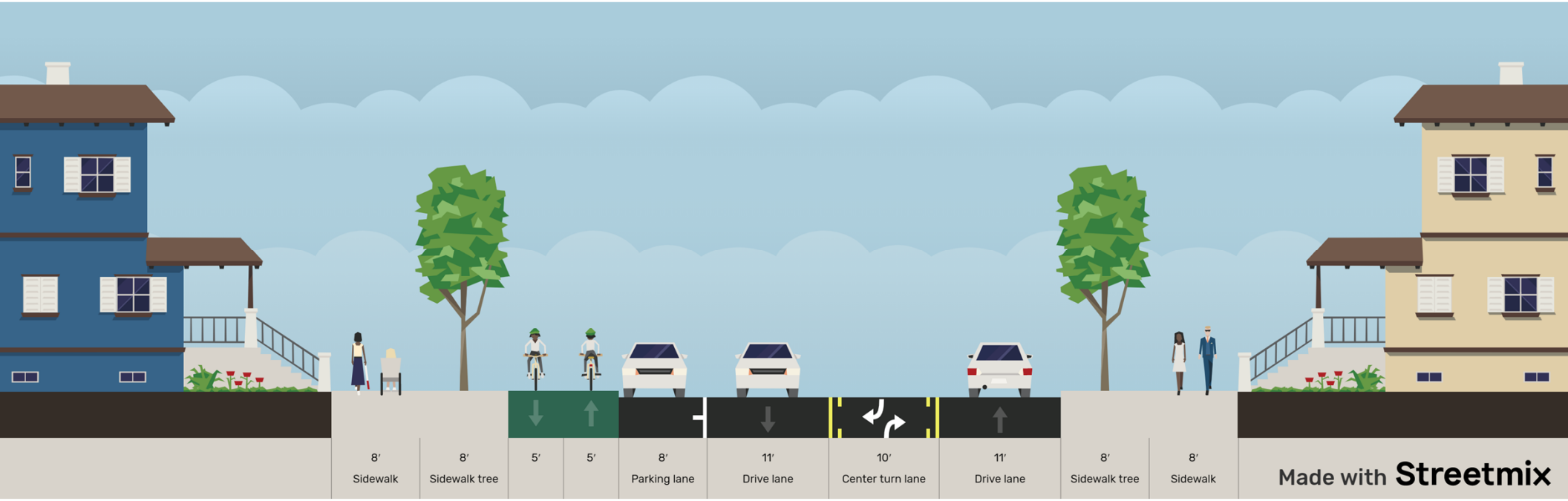

COLLEGE WOODS PARK
COLD SPRING STREET
5'-6"
1'-8"
Swale inlet with concrete pad
Add small concrete pad
around existing CB inlet
Swale to be
planted by URI
Concrete bump-out with granite curb
R3'
7'
R12'
R3'
Painted bump-outs
with 8" SWL
4'
22'
9'-6"
Replace sidewalk
ramps with level
sidewalk and curb

Possible Bike Lane Options

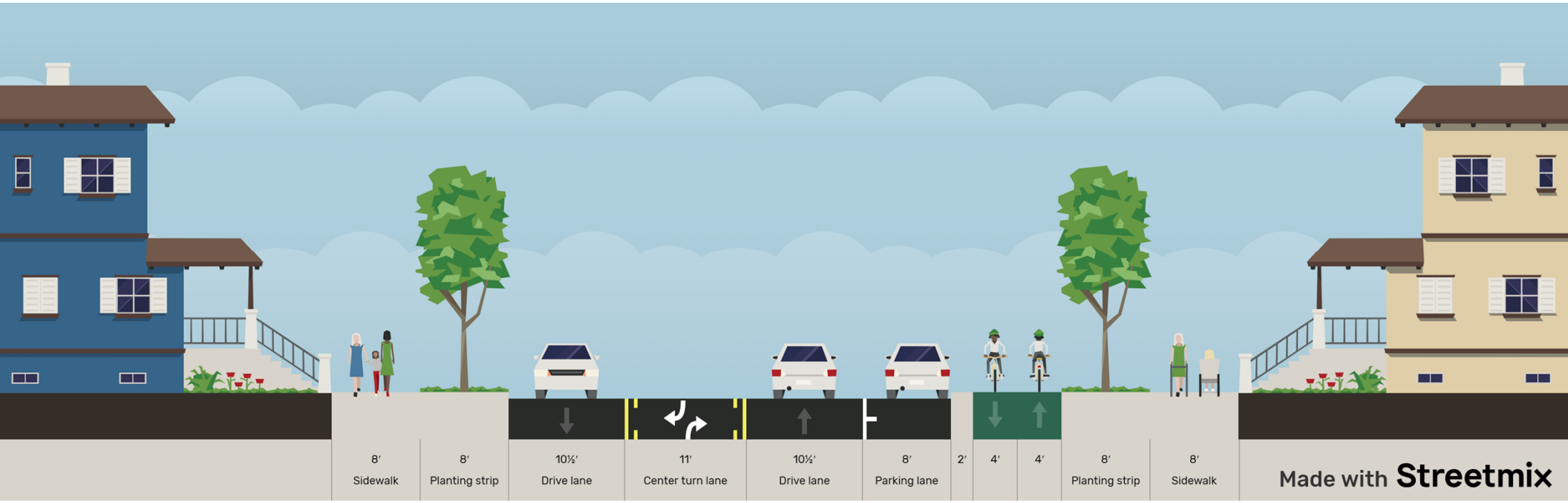
Physical Design Challenges

- Roadway/ROW width
- Utility Placement
- Turning Geometry
- Trees

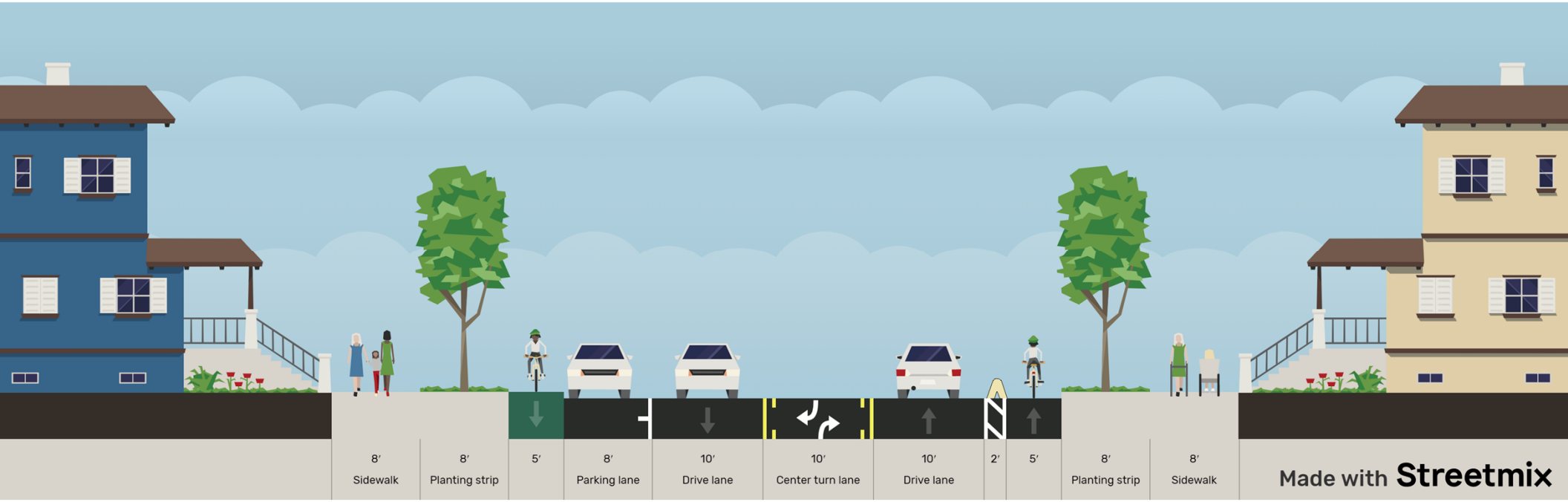
West Cycletrack



East Cycletrack



Separated Bike Lanes



Schedule

- Consider Public Feedback
- Finish Design by Summer 2022
- Final Approval Oct 2022***
- Construction 2023***

- Plan/construct side street improvements 2022/2023

Contact

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https://www.newhavenct.gov/gov/depts/engineering/complete_streets/wavec.htm