Syene Road Reconstruction Project

City of Fitchburg

Advisory Group Meeting #1

May 13, 2021

12:00 PM

THE CITY OF Fitchburg PUBLIC WORKS

Agenda

- Introductions
- Project Overview
- Existing Cross-section
- Cross Sectional Elements
- Next Steps

Location and Limits

Fitchburg

Need for Project

- Why Improve Syene Road?
  - Rural corridor transitioning to mixed-use
  - Pavement condition
  - Intersection functionality

Fitchburg

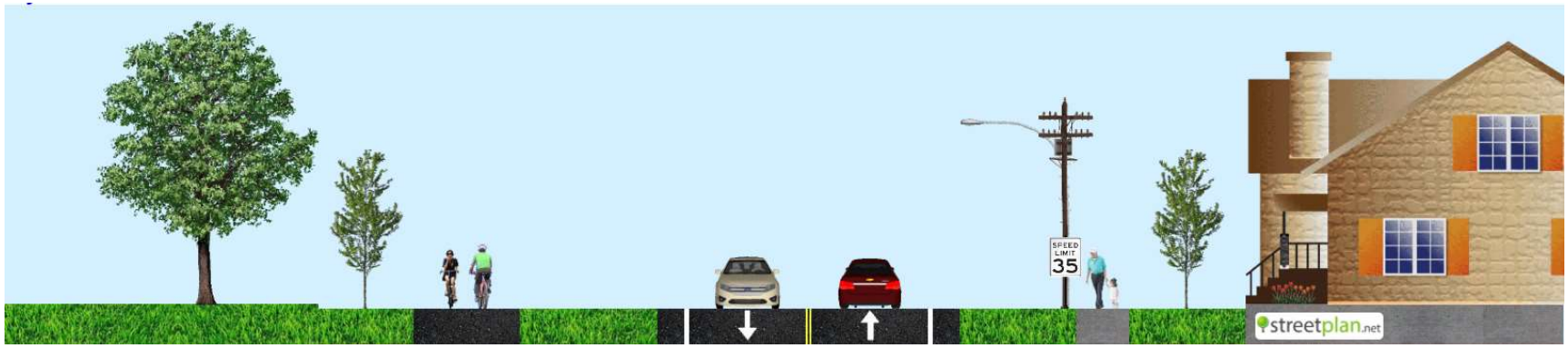
Project Components

- Roadway cross-section
- Intersection improvements
- Lighting
- Stormwater improvements
- Sanitary and water main in select locations

Fitchburg

Existing Cross Section

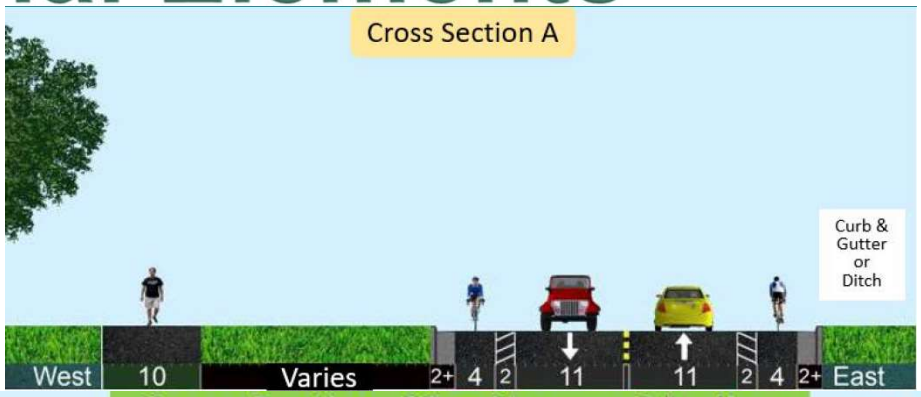
- 11’ travel lanes
- 3-4’ paved shoulders
- 8-10’ Multiuse path along west side of Syene Road
- Sidewalk along majority of east side from Clayton Rd to E. Cheryl Pkwy
- Drainage ditches along both sides

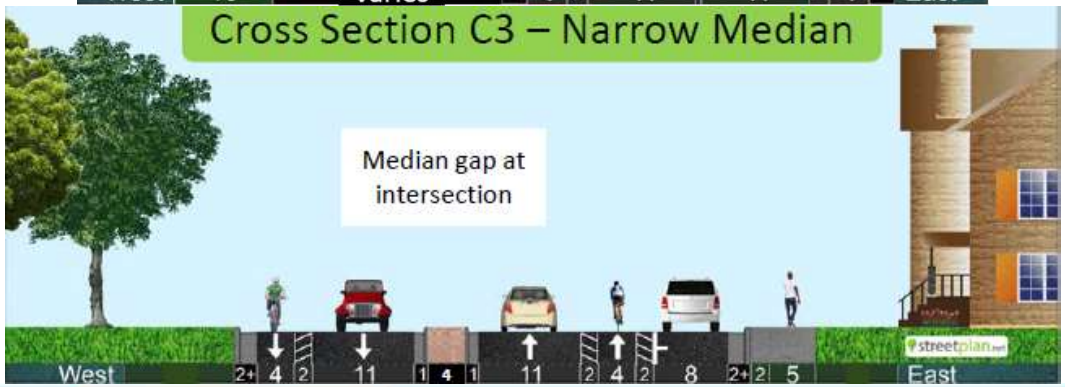


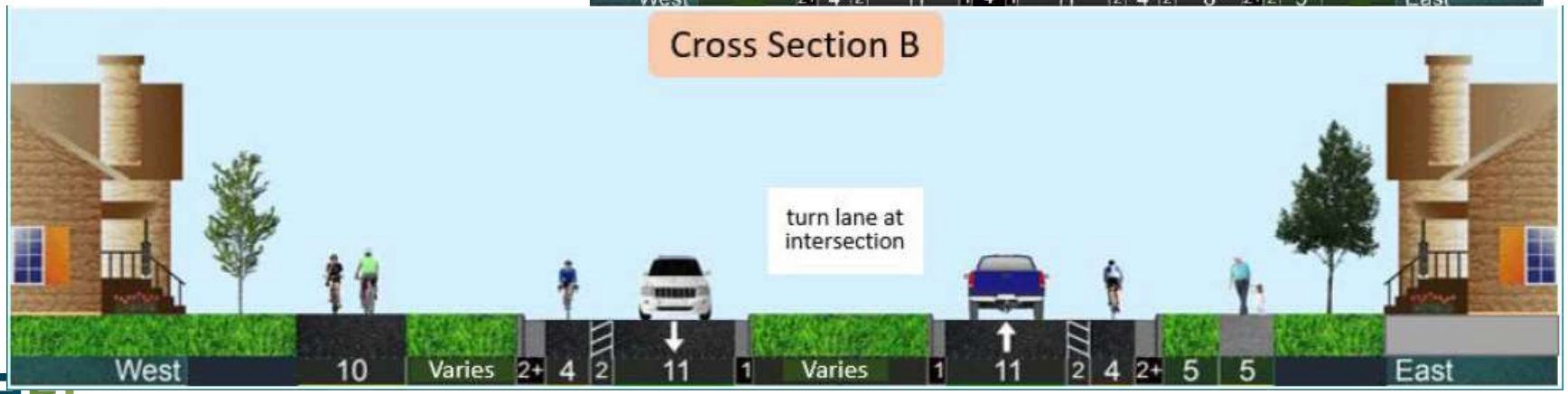
Fitchburg

Cross Sectional Elements

- Terraces
- W. Side Shared Use Path
- Buffered Bike Lanes
- Travel Lanes
- Raised Median
- Curb and Gutter
- E. Side Sidewalk







Fitchburg

Cross Sectional Elements

Terrace

Pros of Terrace

- Buffer between users
- Space for street trees and lighting
- Provides storage for snow
- Can account for grade changes

Cons of Terrace

- Cost of construction
- Cost of maintenance
- Increased cross-section width

Cross Sectional Elements

On-street parking

Pros of Parking

- Provides delivery and transitory parking
- Can slow some vehicle due to side friction
- May limit some through traffic from utilizing S. Syene

Cons of Parking

- Cost of construction
- Cost of maintenance
- Removes terrace and snow storage
- Reduces vehicle and bicycle capacity
- Presents conflicts with cyclists and drivers
    - Possible hazards when parallel parking
        - Could be mitigated with lower speed limit

Syene Road Reconstruction Project

City of Fitchburg

Advisory Group Meeting #2

May 20, 2021

12:00 PM

THE CITY OF Fitchburg PUBLIC WORKS

Cross Sectional Elements

Existing W. Side Shared Use Path

Buffered Bike Lanes

Pros of buffered bike lane

- Separates different users
- On-street facilities are consistent with E. Lacy
- Flexible space for delivery and road work
- Possible safety benefits
    - Increased margin for error

Cons of buffered bike lane

- Cost
- Increased pavement and runoff

Pros of shared use path

- Provides high comfort facility
- Simple trail connections

Cons of shared use path

- Cost
- Increased pavement and runoff

Syene Road Reconstruction Project

City of Fitchburg

Advisory Group Meeting #3
May 27, 2021
12:00 PM

THE CITY OF Fitchburg
PUBLIC WORKS

Cross Sectional Elements

Raised and. Surface Level Medians

Pros of Median

- Channelizes traffic
- Reinforces access restrictions
- Slows some drivers (1-8 mph)
- Provides pedestrian refuge
- Some aesthetic qualities
- Maintains continuity without issues of snow plows hitting them

Cons of Median

- Loss of some access
- Cost of construction
- Cost of maintenance
- Perception of waste of space
- Debate over proper landscaping
- Some increased runoff
- Requires 20’ clear zone
- Increased roadway width

Cross Sectional Elements

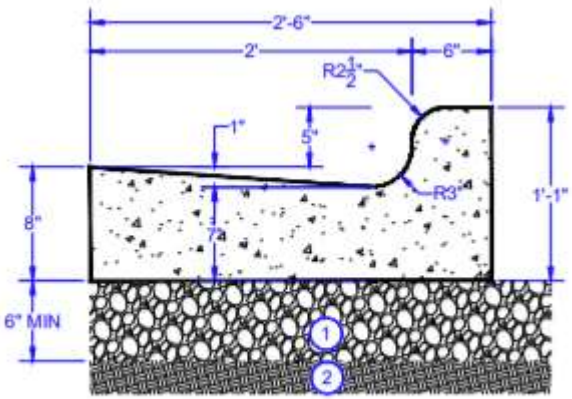
Curb and Gutter

Pros of C&G

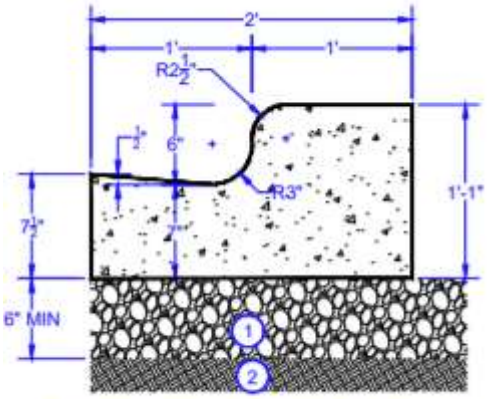
- Reduces width compared to ditches
- Maintains pavement edge
- Removes need to driveway culverts

Cons of C&G

- Cost of construction
- Cost of maintenance
- Some increased runoff
- Higher potential to clog at inlets
- Increased roadway width



30" CONCRETE CURB & GUTTER



24" CONCRETE CURB & GUTTER

Fitchburg

Cross Sectional Elements

Mostly Existing E. Side Sidewalk

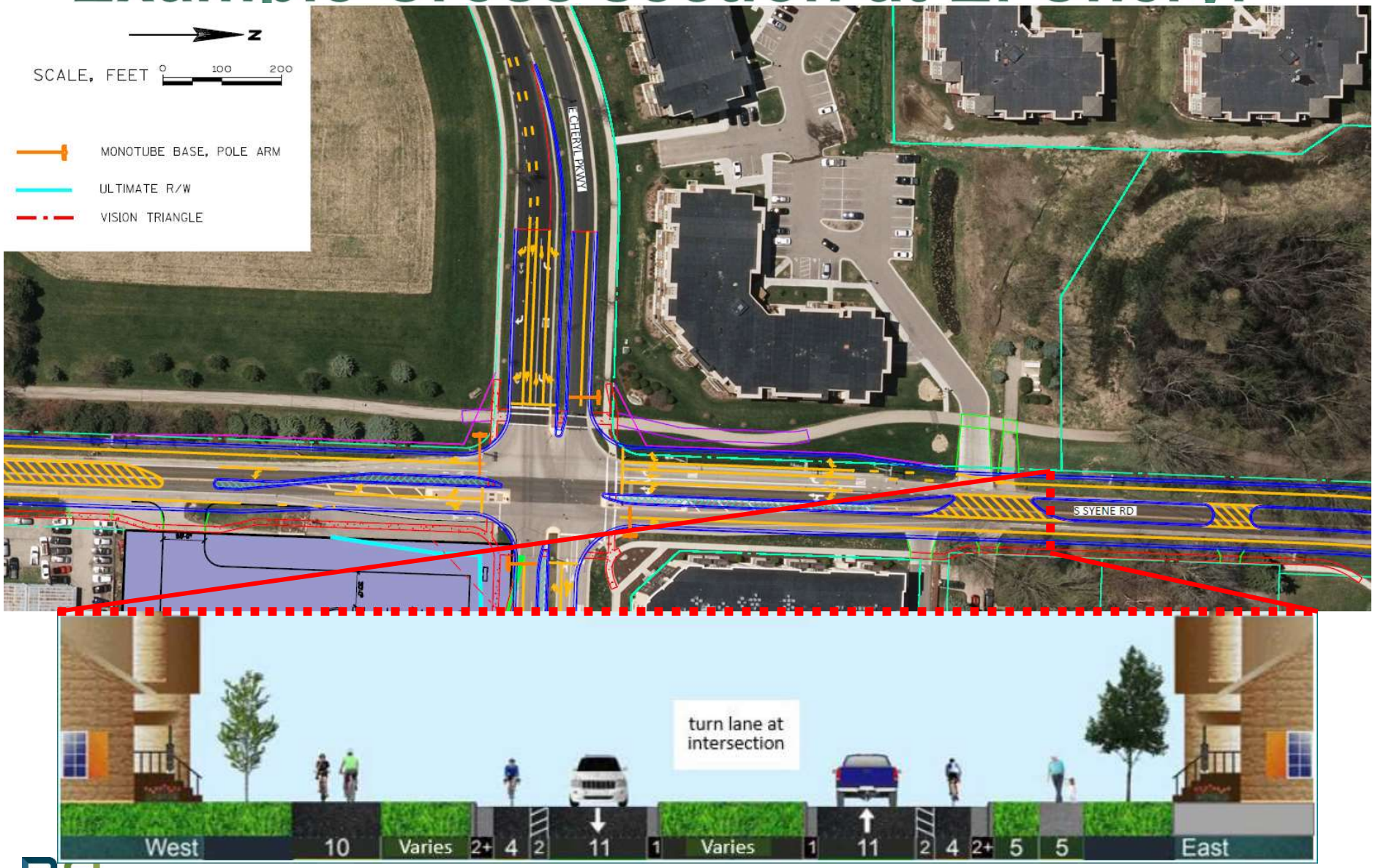
Pros of sidewalk

- Separates different users
- Provides continuity and access to destinations on corridor

Cons of sidewalk

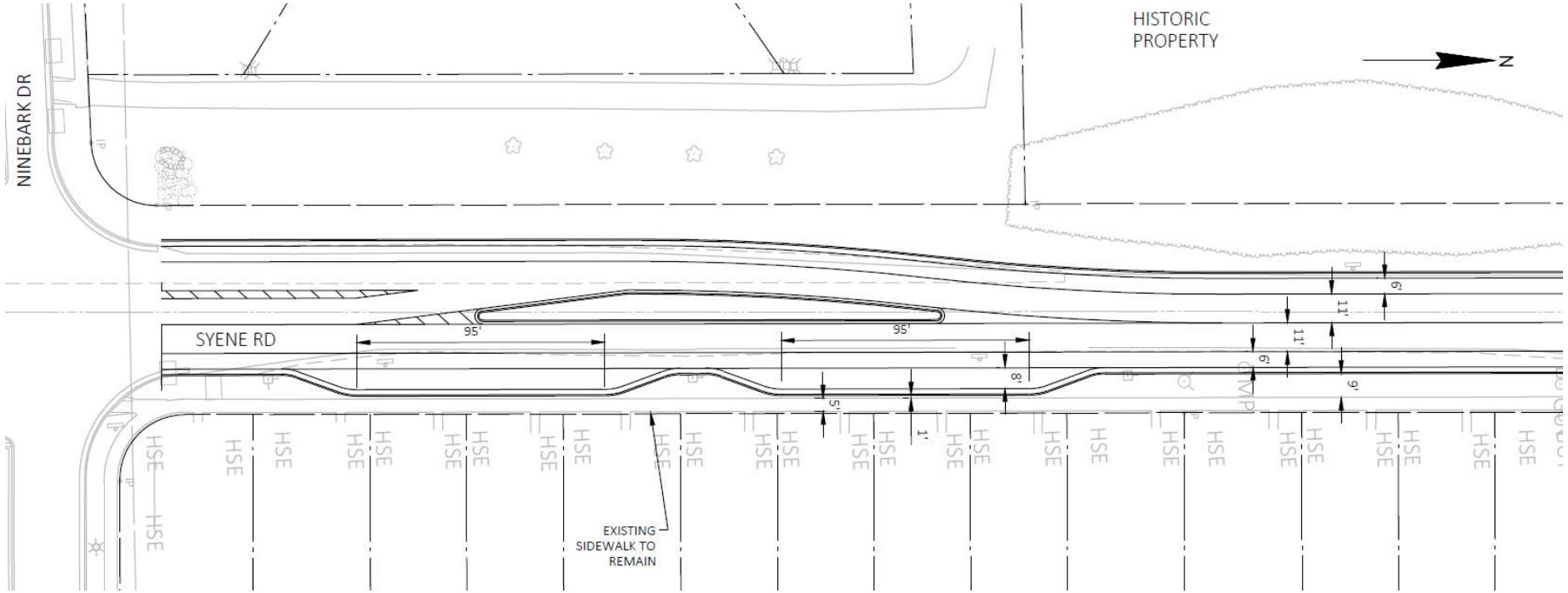
- Cost of construction
- Cost of long-term maintenance
- Snow removal responsibility

Example Cross section at E. Cheryl



Fitchburg

Example Cross section btw Ninebark and Argus



Fitchburg

Syene Road Reconstruction Project

City of Fitchburg

Advisory Group Meeting #4

June 10, 2021

12:00 PM

THE CITY OF Fitchburg PUBLIC WORKS

Speed Data on S. Syene

- Before speed data collected in April 2019
- Speed limit reduced to 35 in early 2020
- After speed data collected in September 2020

- 85th Percentile Speed
  - Northbound
    - Before – 35 MPH* (64% of traffic 1 – 15 MPH)
    - After – 46 MPH

  - Southbound
    - Before – 58 MPH
    - After – 47 MPH

- Follow up info on counts of speed study

Fitchburg

Speed Management Countermeasures

- Optical Speed Bars (+4 to -5 MPH)
- Speed limit pavement marking (+1 to -3 MPH)
- Bulb-out (1 to 4 MPH Reduction)
- Driver Feedback Sign (1 to 7 MPH Reduction)
- Center Island (1 to 8 MPH Reduction)
- Entrance Treatments (0 to 11 MPH Reduction) (UK results)

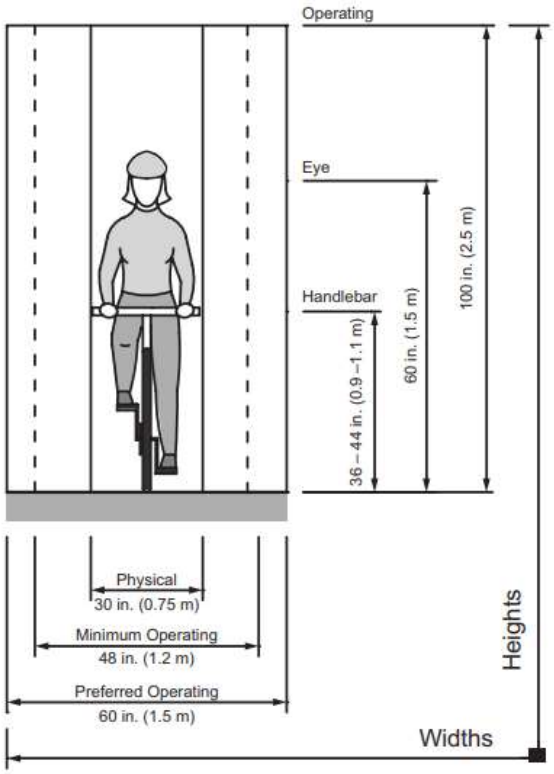
- Curb and Gutter
- Roundabouts
- Raised intersections

Source: https://safety.fhwa.dot.gov/speedmgt/ref_mats/eng_count/2014/eng_ctm_spd_14.pdf

Cross-sectional element width

- Medians
  - Minimum 6” for pedestrian refuge and mowing equipment
  - Non-landscaped could go smaller
- Travel Lanes
  - A lot of research on appropriate widths for different contexts
  - 10-11’ width is most appropriate in this context
- Bike Lanes
  - AASHTO Bike Guide recommends a minimum 4’ of operating width, 5’ recommended
  - Issues with asphalt-curb and gutter seam
  - Buffer (1-3’) offers additional comfort away from travel lane
    - Reference to legality of riding abreast in statute
- Terrace
  - Snow Storage
  - 7’ minimum for trees

Cross-sectional element width



Source: AASHTO Guide for the Development of Bicycle Facilities 2012 (pg 3-2)

Fitchburg

Syene Road Reconstruction Project

City of Fitchburg

Advisory Group Meeting #5

June 24, 2021

12:00 PM

THE CITY OF Fitchburg PUBLIC WORKS

Agenda

- (15 minutes) Review of recently requested information
    - Speed data before and after speed limit reduction (with emphasis on counts)
    - Research on traffic calming features efficacy (with C&G, roundabouts, and raised intersections included)
    - Quick reference to state statute related to bicycle riding (e.g. riding abreast)
- (60 minutes) Draft Typical Section Feedback
- (15 minutes) Round Robin and next steps

Speed Data on S. Syene

- Before speed data collected in April 2019 (April 9-11)
  - Only Tuesday April 9 used
  - 4/10 and 4/11 data was not used due to abnormalities
  - Pneumatic tubes used to collect data
- Speed limit reduced to 35 in early 2020
- After speed data collected in September 2020 (Sept. 29-Oct 1)
  - Only Tuesday Sept 29 used for consistency
  - Radar used to collect data

- 85th Percentile Speed
  - Northbound
    - Before – 38 MPH (3431 vehicles)
    - After – 46 MPH (3236 vehicles)
    - +8 MPH

  - Southbound
    - Before – 58 MPH (4012 vehicles)
    - After – 47 MPH ((3237 vehicles)
    - -11 MPH

Fitchburg

Speed Management Countermeasures

- Optical Speed Bars (+4 to -5 MPH)
- Speed limit pavement marking (+1 to -3 MPH)
- Bulb-out (1 to 4 MPH Reduction)
- Driver Feedback Sign (1 to 7 MPH Reduction)
- Center Island (1 to 8 MPH Reduction)
- Entrance Treatments (0 to 11 MPH Reduction) (UK results)

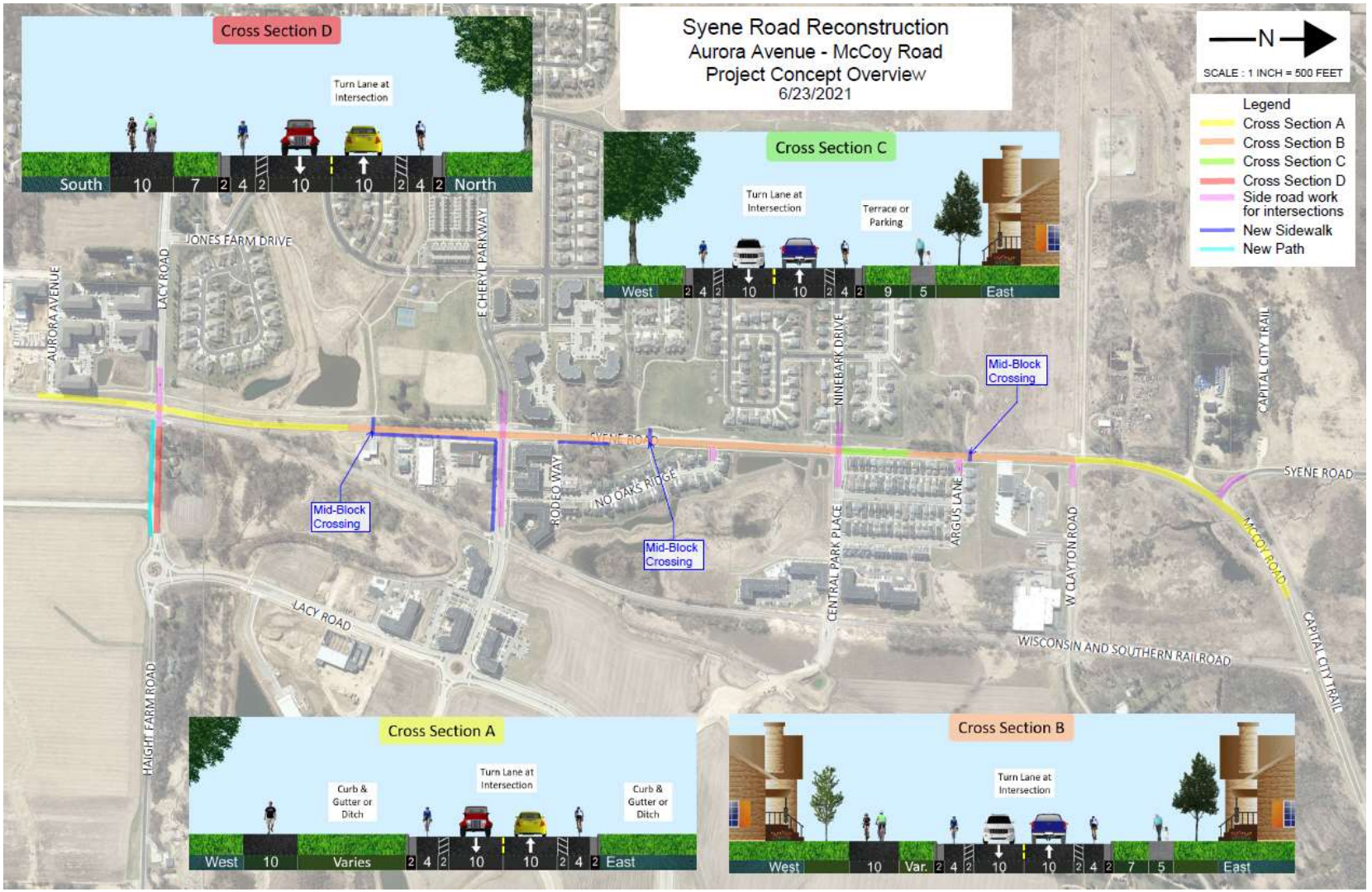
- Curb and Gutter – still no research found to confirm reduction
- Roundabouts (-8 to -20 mph: max recommended speed is 20-25 mph)
- Raised intersections – minimal to similar to speed humps

Source: https://safety.fhwa.dot.gov/speedmgt/ref_mats/eng_count/2014/eng_ctm_spd_14.pdf

State Bicycle Laws

- WisDOT Reference Website
- 346.80 (3)
  - (a) Persons riding bicycles, electric scooters, or electric personal assistive mobility devices upon a roadway may ride 2 abreast if such operation does not impede the normal and reasonable movement of traffic. Bicycle, electric scooter, or electric personal assistive mobility device operators riding 2 abreast on a 2-lane or more roadway shall ride within a single lane.
  - (b) Persons riding bicycles upon a roadway may not ride more than 2 abreast except upon any path, trail, lane or other way set aside for the exclusive use of bicycles, electric scooters, and electric personal assistive mobility devices

Draft Typical Sections



Fitchburg

Next Steps

- Staff will follow-up on questions received from residents
- Next meeting July 15

Fitchburg

Syene Road Reconstruction Project

City of Fitchburg

Advisory Group Meeting #6

July 15, 2021

12:00 PM

THE CITY OF Fitchburg PUBLIC WORKS

Agenda

- (15 minutes) Review of initial funding/scoping direction
- (15 minutes) McCoy & Syene intersection discussion
- (15 minutes) Draft Typical Section Feedback
- (15 minutes) Round Robin and next steps
- (30 minutes) Extra time in case folks have other items

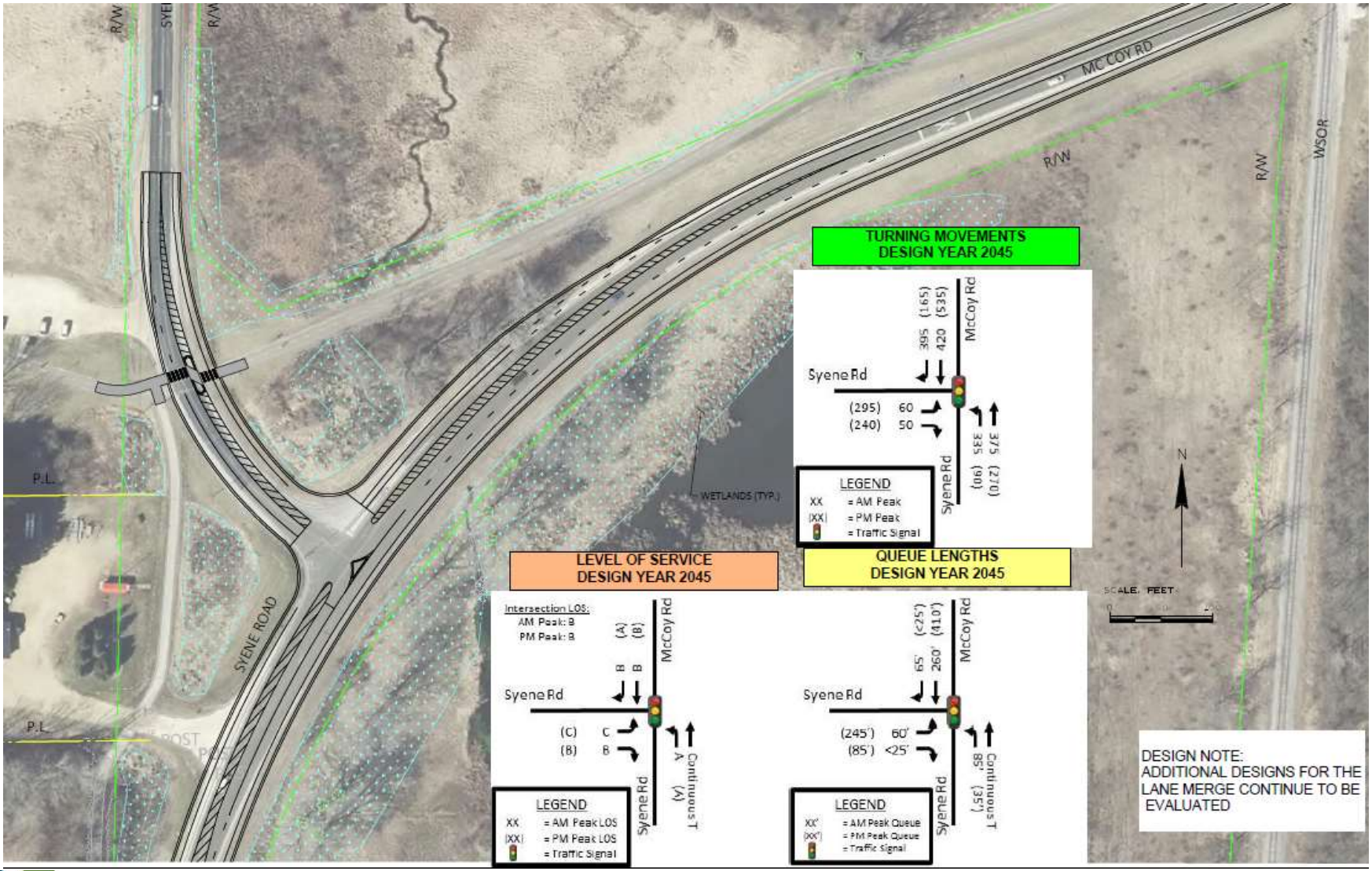
Scoping Direction

- Proposed Capital Project Amendment
  - Splits the project into two portions:
    - South of W. Clayton
    - North of W. Clayton
  - Officially available on Monday July 19
  - Council Approval of CIP on July 27
- August 15 – Highway Safety Improvement Application Due

McCoy & Syene Intersection

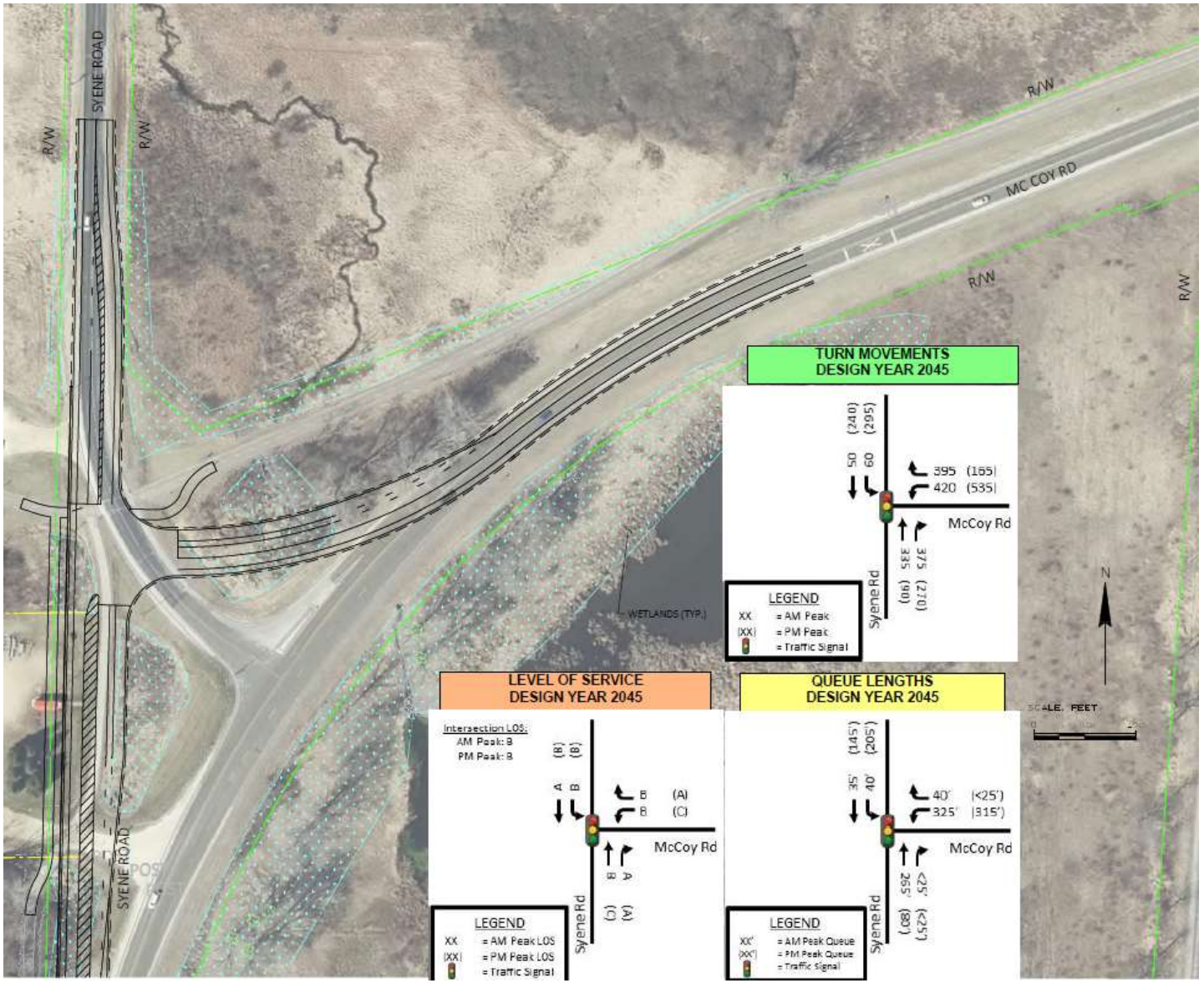
- If project north of W. Clayton is broken off for HSIP funding, nonbinding intersection configuration must be proposed in application
- Two options:
  - Existing roadway configuration with traffic signal and enhanced crossing
  - Reoriented roadway configuration with traffic signal

McCoy & Syene Intersection



Fitchburg

McCoy & Syene Intersection



Fitchburg

Progress and Next Steps

- Staff will schedule check-ins with property owners
- Typical Section Resolution
  - Send out to resident group
  - Referral on July 27
  - Bicycle Committee on August 3
  - Transportation and Transit Commission on August 12
  - Board of Public Works on August 16
  - Common Council on August 24
- Next small group meeting planned for August 19 or 26 to discuss intersection control at
  - E. Cheryl
  - Ninebark/Central Park