



Lincoln Parkway Traffic Analysis

City Council Meeting

June 6, 2023

Lincoln Parkway



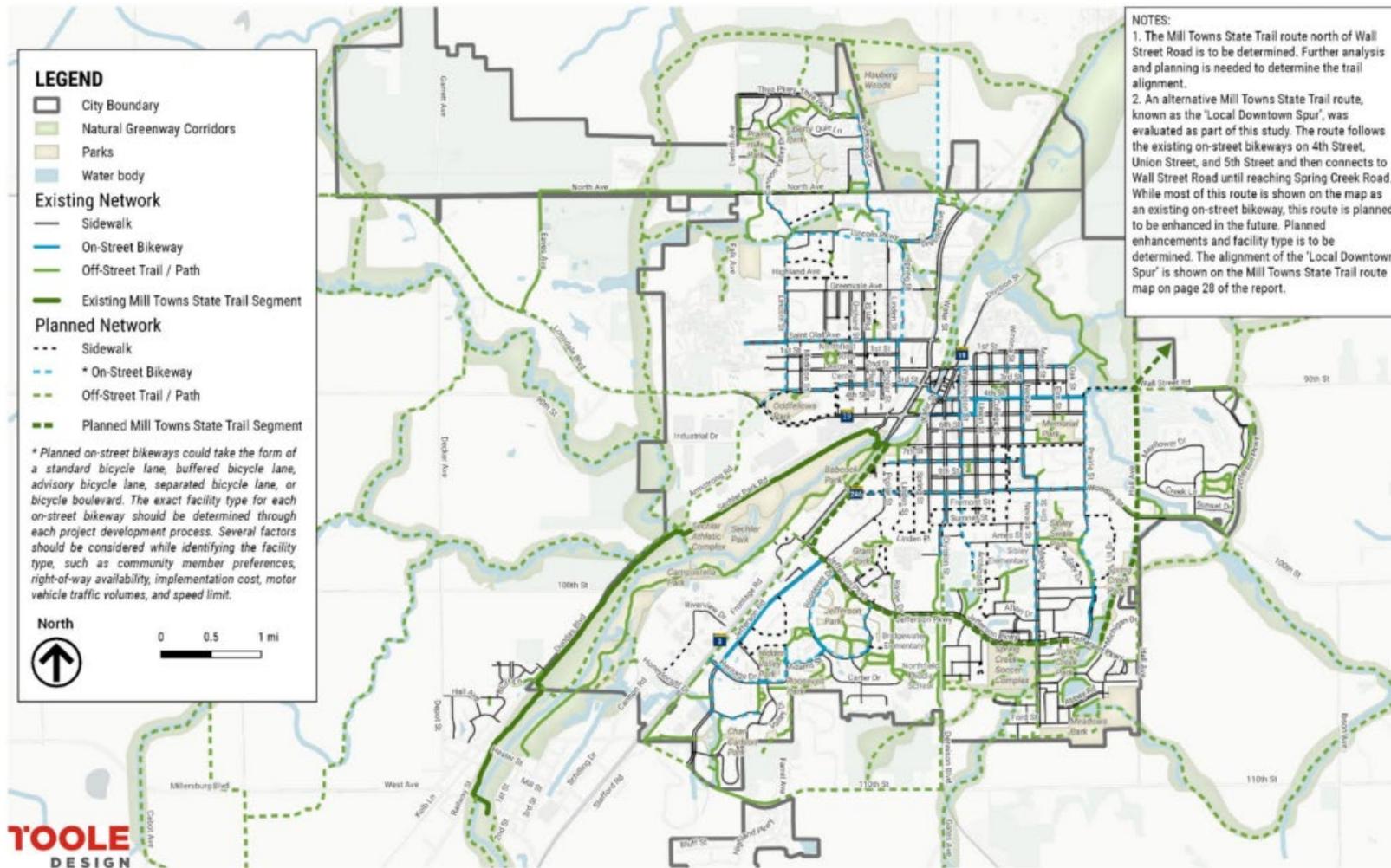
School District Observations

- Lack of Staff Parking at NCEC on site, staff park on Lincoln Pkwy
- Two documented cross guard violations
- During Greenvale Pickup – vehicles are regularly backing out onto Lincoln Pkwy
- Greenvale Enrollment ~ 430 Student, new school can accommodate 600 students
- Parents dropping off and picking up on Lincoln Pkwy (rather than drop off/pickup within the site)
- 50 plus students open enrolled (outside of walking distance/bus service not provided)

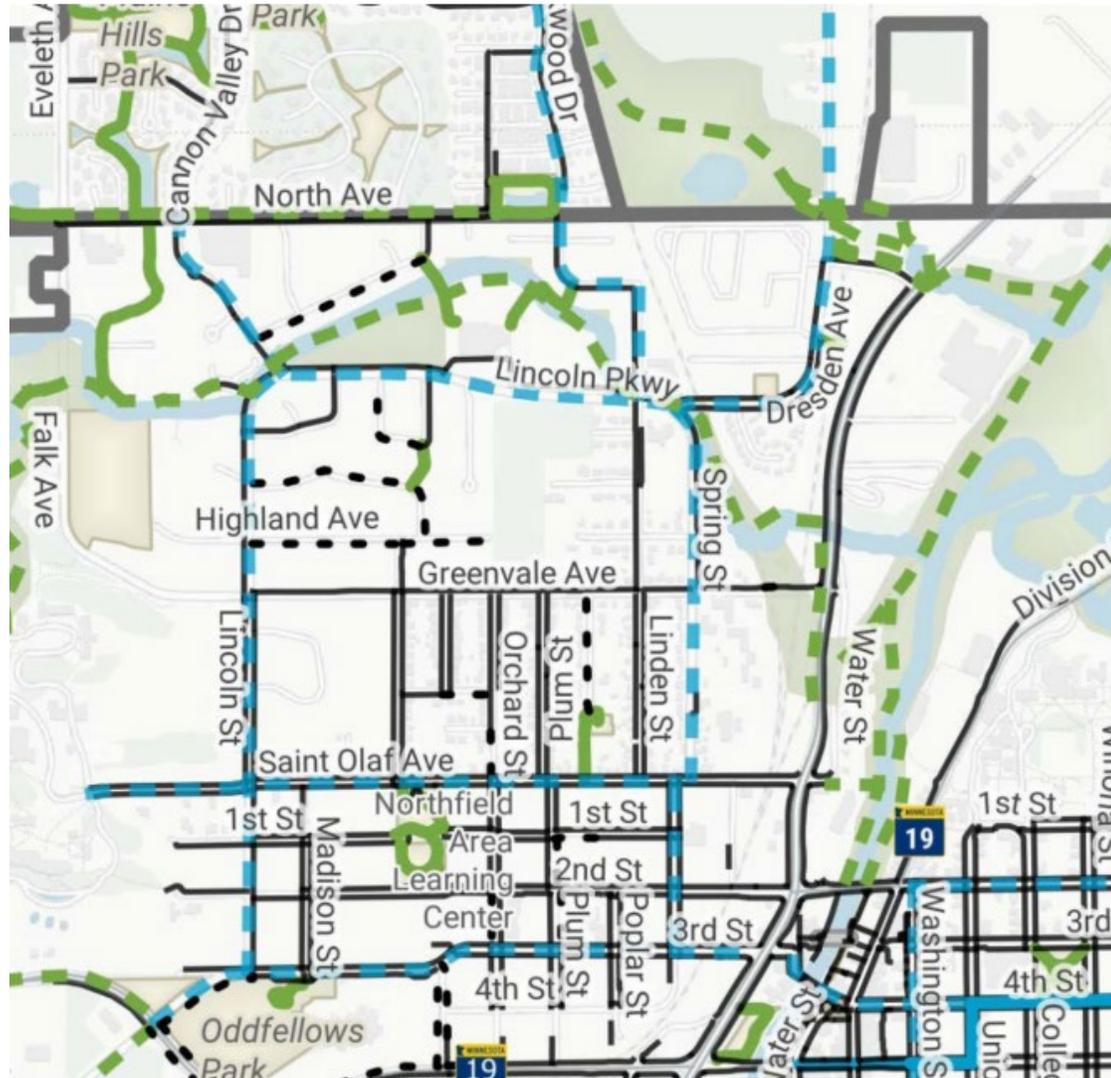
Concerns from the Public

- Vehicles not yielding to pedestrians
- Need to be able to cross street outside of school hours when cross guards aren't present
- Vehicles speeding on Lincoln Pkwy
- Difficult to bike/no bike accommodations
- Sidewalk on east side of Greenvale parking lot was closed last winter
- On-street parking and crosswalk visibility

Planned Walking and Bicycling Network



Greenvale Elementary School Area



Existing Network

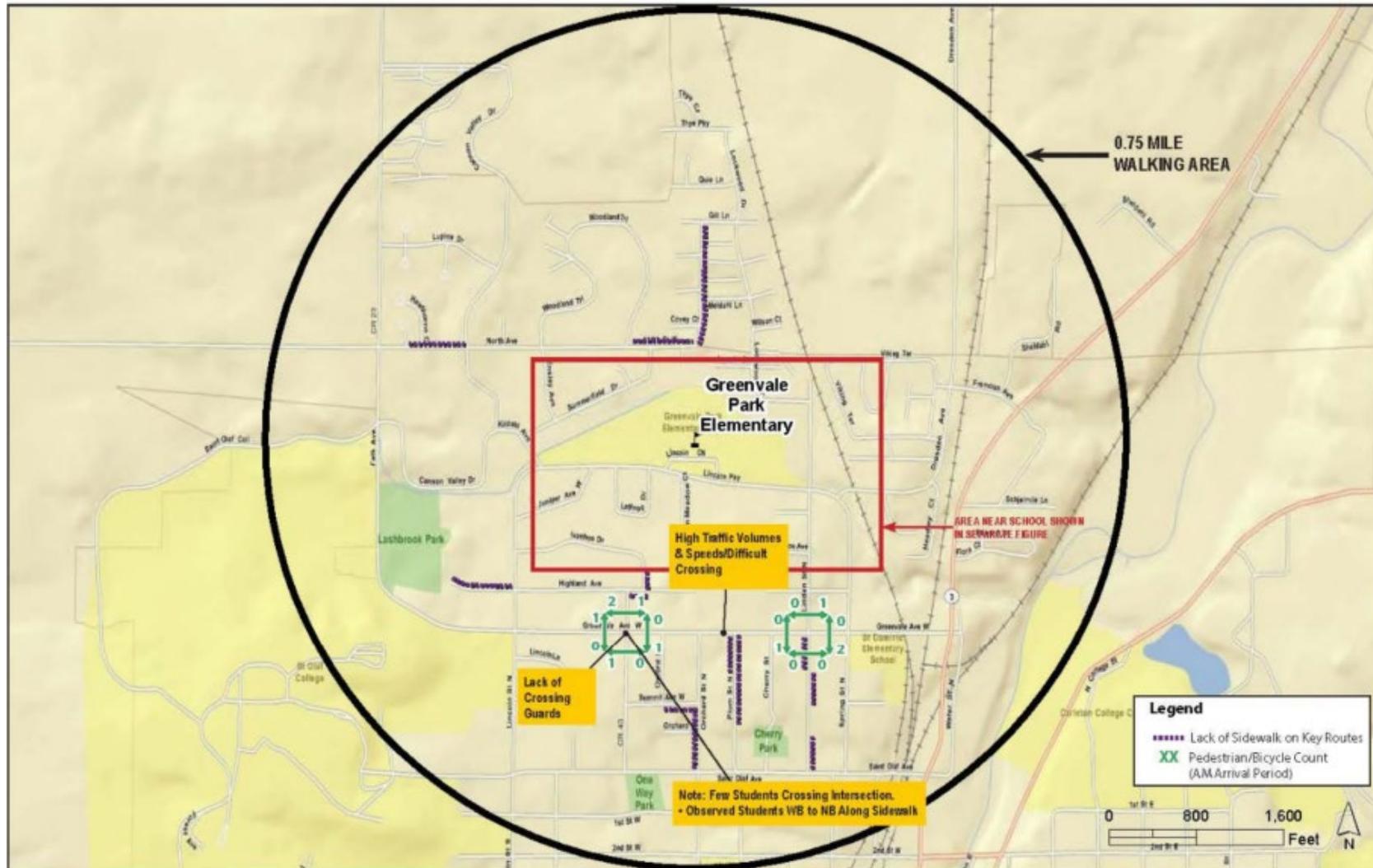
- Sidewalk
- On-Street Bikeway
- Off-Street Trail / Path
- Existing Mill Towns State Trail Segment

Planned Network

- - - Sidewalk
- - - * On-Street Bikeway
- - - Off-Street Trail / Path
- - - Planned Mill Towns State Trail Segment

* Planned on-street bikeways could take the form of a standard bicycle lane, buffered bicycle lane, advisory bicycle lane, separated bicycle lane, or bicycle boulevard. The exact facility type for each on-street bikeway should be determined through each project development process. Several factors should be considered while identifying the facility type, such as community member preferences, right-of-way availability, implementation cost, motor vehicle traffic volumes, and speed limit.

Safe Routes to School Plan



After Opening Observed Congestion Issues



Short-term 2021 Actions

Short Term Implementation/Actions

- Relocate dynamic speed sign from Second Street to Lincoln Pkwy
- No Parking & yellow curb by crosswalks
- No Parking & yellow curb north side of Lincoln Pkwy by Greenvale Entrance
- More flagger training for School District Staff
- Deployment of speed counters this fall to collect speeds on Lincoln Pkwy
- Northfield Schools is exploring contracted parking in the area to serve staff
- Northfield School interested in coordinated ongoing group walk to school efforts

School Study Update

- Data collected October 8, 2022
- Observations conducted October 15, 2022
- Operations
 - Overall operations acceptable for the peak hours
 - Morning peak (drop off) – queuing onsite
 - Afternoon peak (pick-up) – queueing onto Lincoln Parkway north shoulder
- Illegal maneuvers observed
 - Wrong-way in from eastbound left

2022 Observed Congestion Issues

002372 2022/10/06 15:18:53



Vehicles exiting parking lot during afternoon pickup cannot see oncoming motorist, due to vehicles in shoulder

2022 Observed Congestion Issues

002372 2022/10/06 15:20:03



Vehicle confusion on shoulder

2022 Observed Congestion Issues



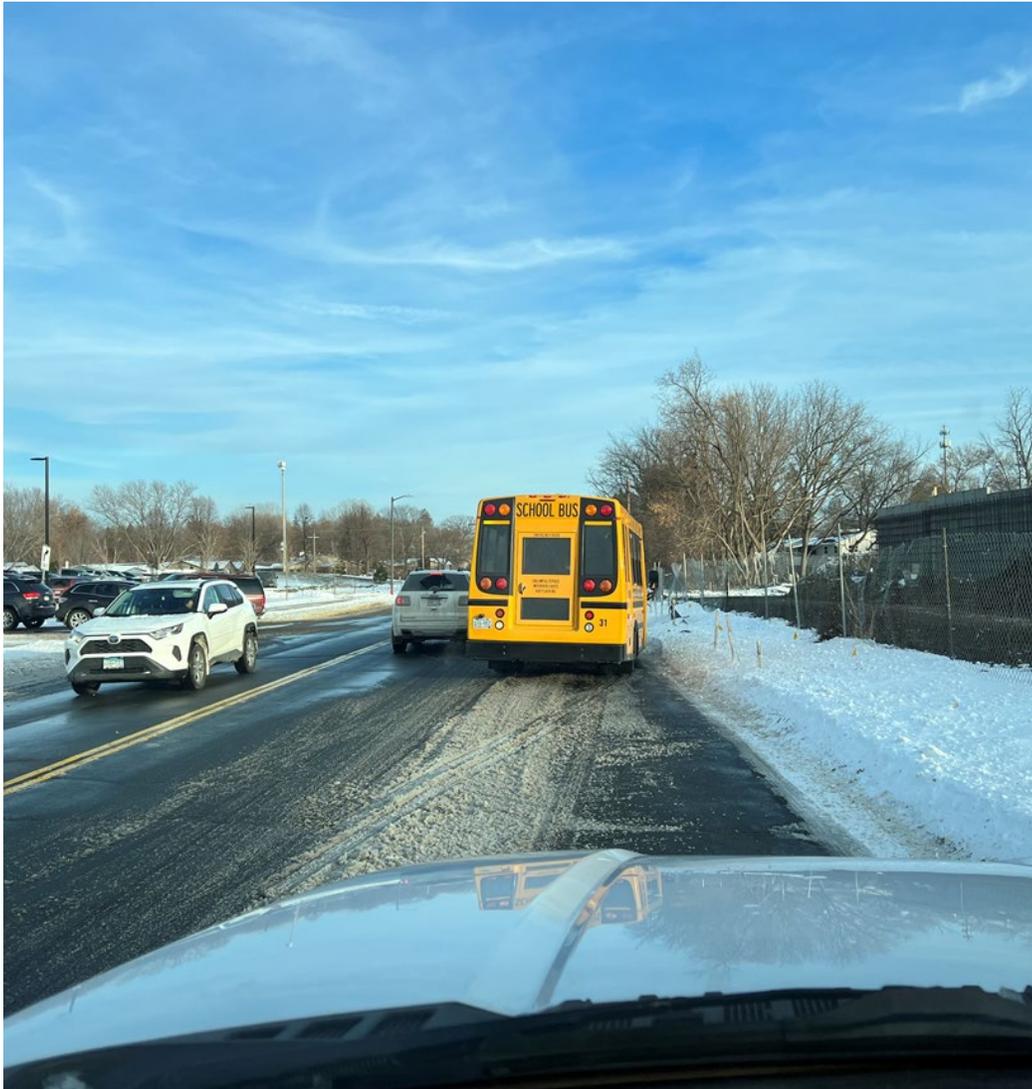
Vehicle confusion (White Tahoe), turning into the outbound lane of the driveway, Van blocking sidewalk

2022 Observed Congestion Issues



Parking on the South side of Lincoln Parkway picking up

2022 Observed Congestion Issues



Bus bypassing on south shoulder

2022 Observed Congestion Issues



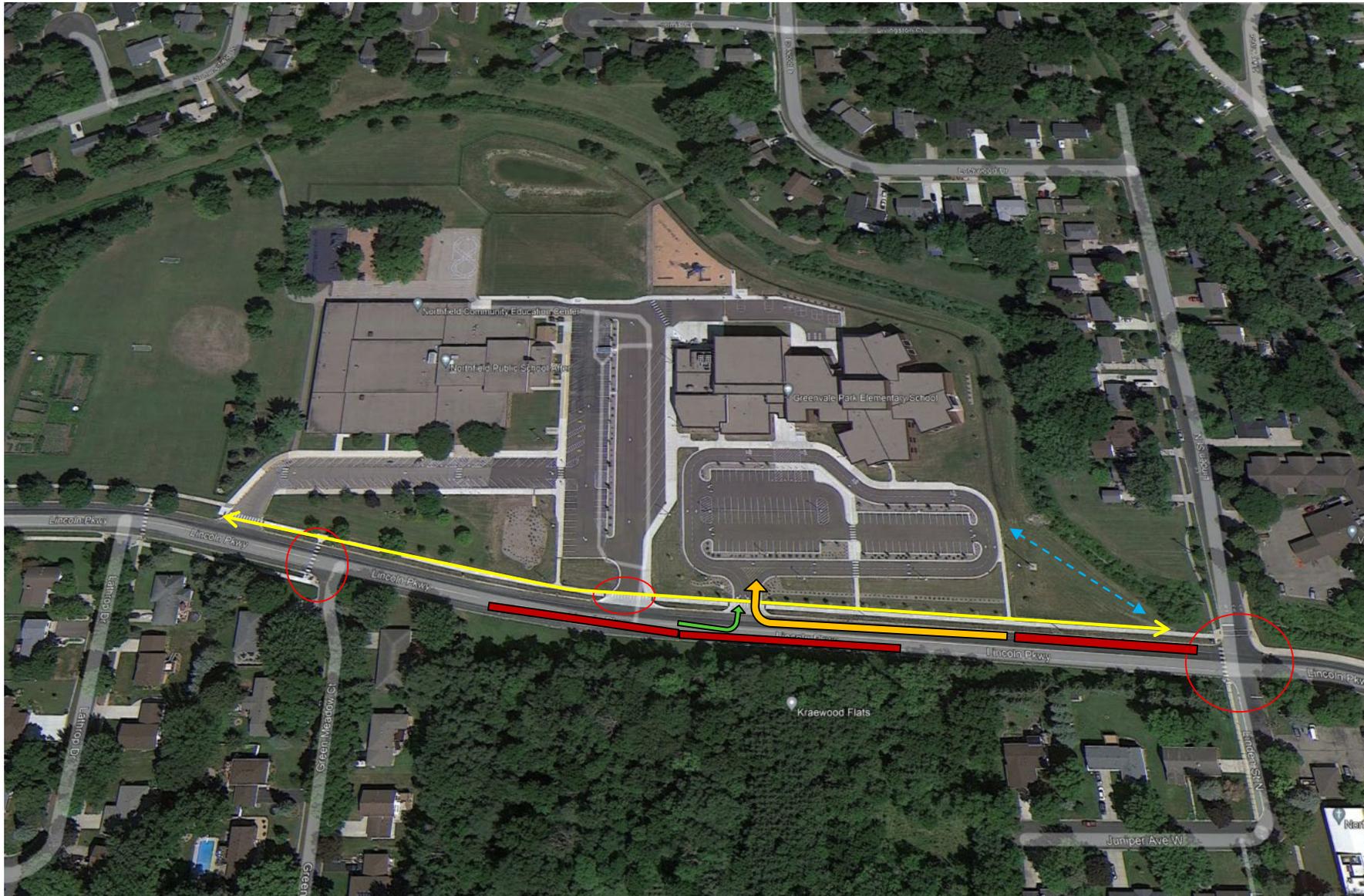
Vehicle thinking two inbound lanes, and truck bypassing into coming traffic

2023 School Operations Field Review

Noteworthy Takeaways

- Drop-off/Arrival
 - Crossing Guards – Lincoln/Linden, Green Meadow Court, Center Driveway
 - Bikers use sidewalk
 - Eastbound left queues minimal (up to 4 vehicles)
 - Bike racks full
- Pick-up/Dismissal
 - Before lot drop-off fills – parents already waiting along north Lincoln Parkway north curb line
 - Signed no parking from school to around the eastern N-S sidewalk to the school
 - Once lot fills/a little prior – queue on Lincoln extends to Linden
 - Some parking starts to occur on south side of Lincoln Parkway
 - Green Meadow Court crossing (across Lincoln) and Linden Street crossing (north side) busiest

2023 Observations



Legend

-  Crossing Guards
-  Parents parking
-  Left turns
-  Backups/parent pick-up
-  Ped Shortcut
-  Bicyclists

Lincoln Parkway Traffic Study

- Understand the effectiveness of the short-term improvement measures completed in 2021
- Develop future options and recommendations for Lincoln Parkway and Dresden Avenue
- Increase multimodal connections and safety
- Determine multimodal network improvements for Safe Routes to School

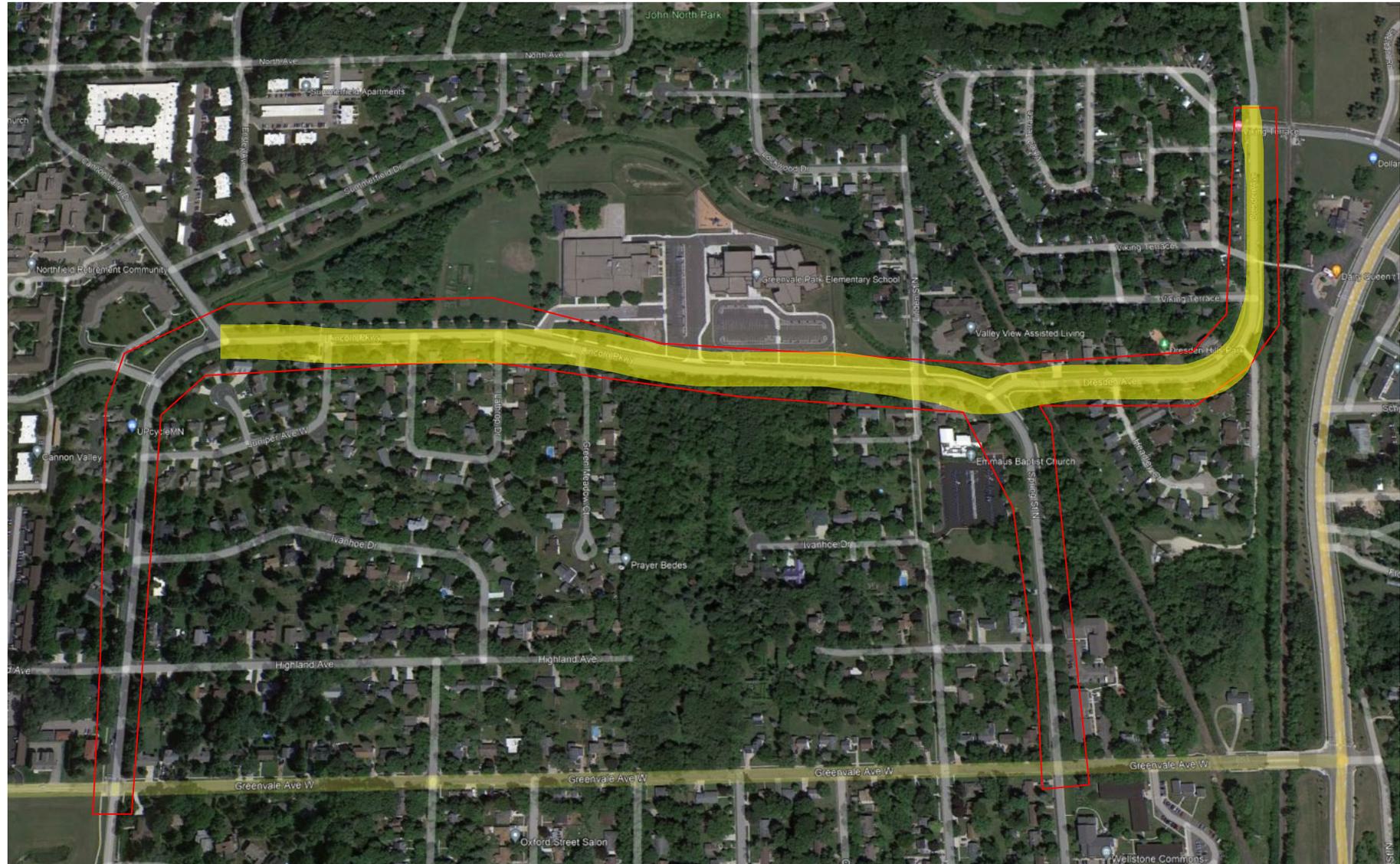
Study Extents

Project area

- Lincoln Parkway
- Dresden Avenue
- $\frac{3}{4}$ mile SRTS

Also incorporate previous recommendations

- Lincoln Street
- Spring Street



Study Goals



Establish a plan to provide a safe and efficient transportation system for all roadway users, understanding the unique transportation characteristics near schools



Identify ways to provide safer and more comfortable walking and biking routes in the area



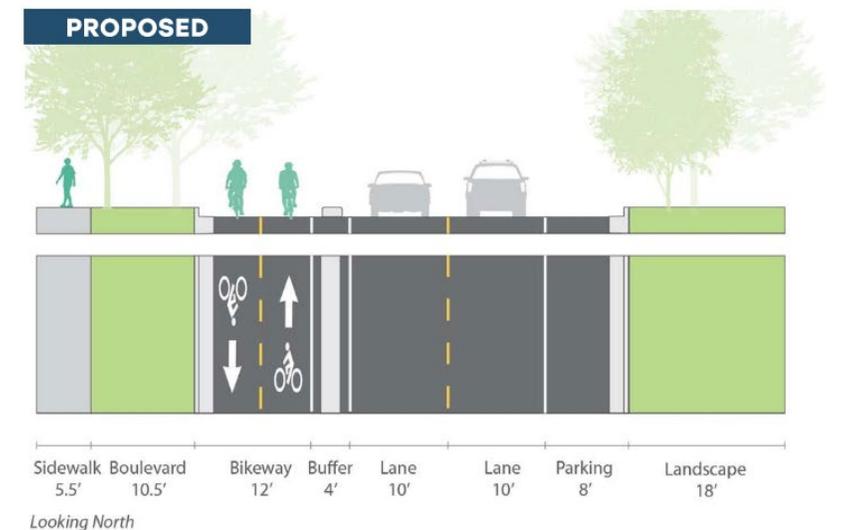
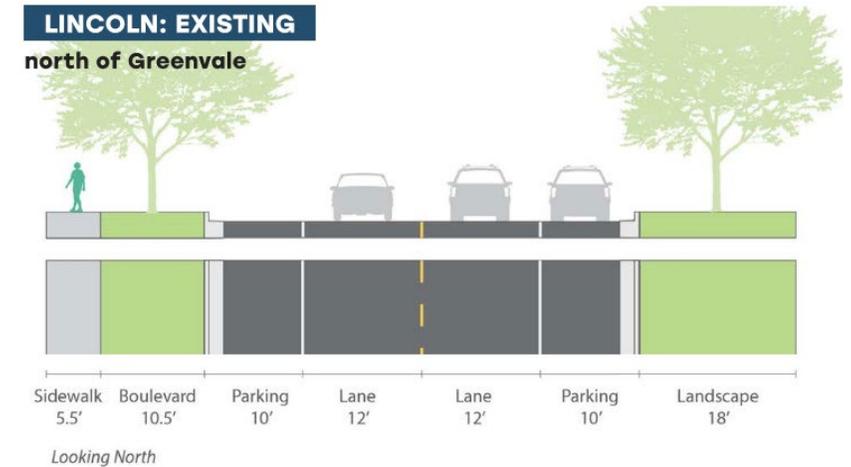
Support community planning and development goals



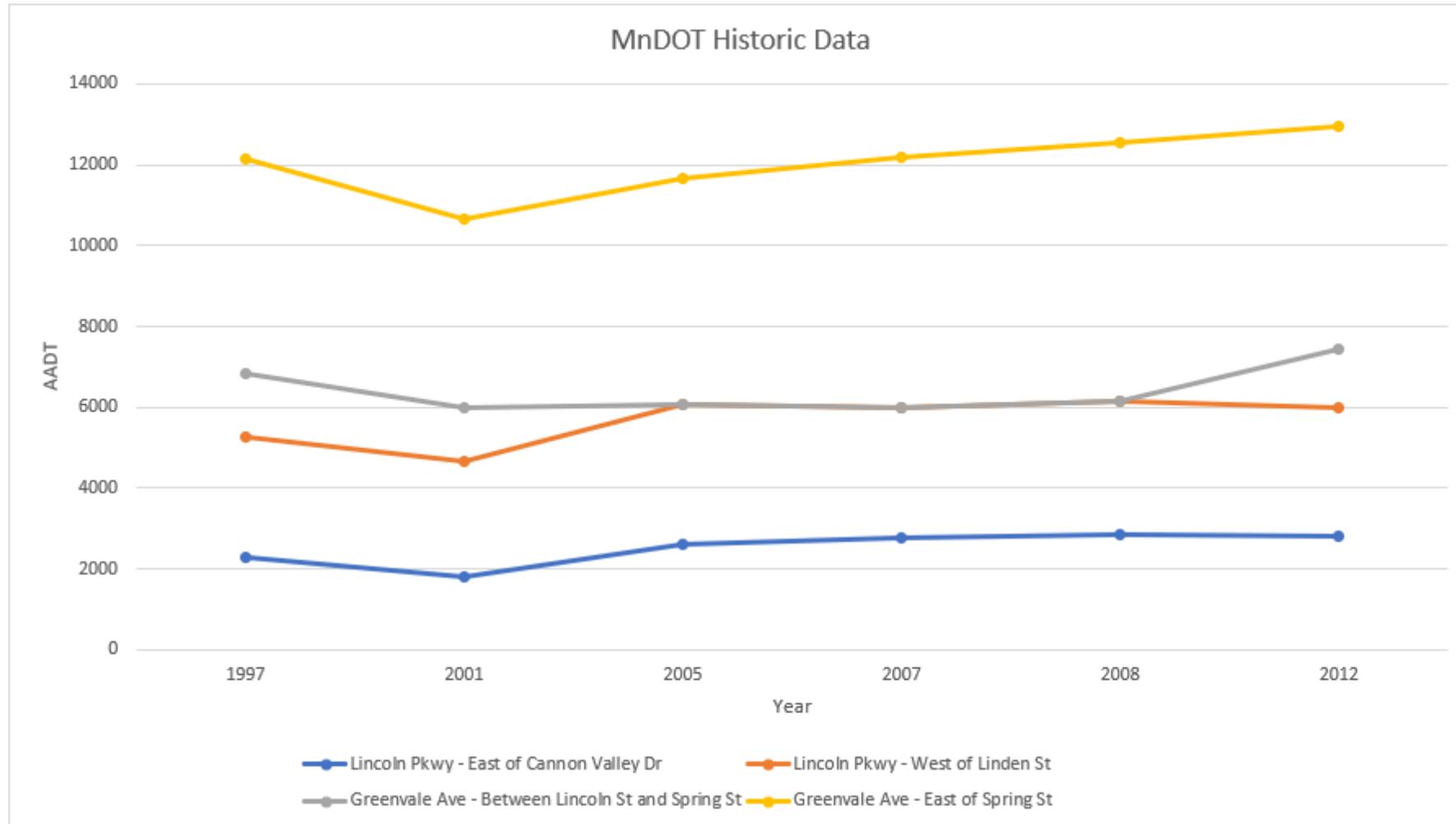
Recommend improvements to address traffic-related issues associated with school pick-up and drop-off activities

Lincoln Street and Spring Street Connections

- **Lincoln Street** (match into previous recommendations)
(Pedestrian and Bikeway Analyzation Report, 10/2022)
 - west side in-street bikeway
- **Spring Street** (match into previous recommendations)
(Pedestrian and Bikeway Analyzation Report, 10/2022)
 - east side in-street bikeway
- **Lincoln Parkway**
(this study will provide recommendations)
 - north side off-street bikeway



Historic Traffic Volumes



Estimated 2022
Daily Traffic

●

●

●

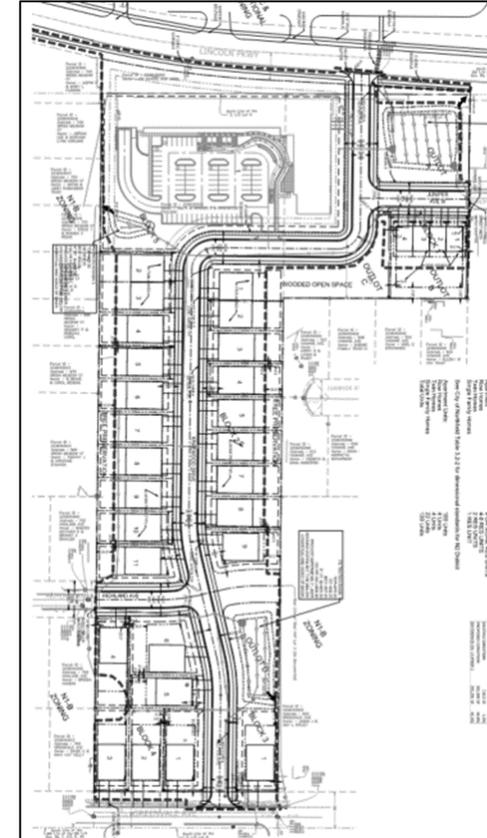
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Lincoln Parkway Traffic Analysis

Traffic analysis

- Future analysis using traffic study data and accounting for growth
- 2023 analysis adds traffic associated with the Kraewood development and Cedar Meadows development
- 2045 analysis assumes a 0.5% annual growth rate for all movements (including school-related movements to account for potential school enrollment growth)

| Intersection | Traffic Control | AM (PM) Level of Service | |
|---------------------------------------|-----------------|--------------------------|------|
| | | 2023 | 2045 |
| Lincoln Pkwy And West School Access | TWSC | A(A) | A(A) |
| Lincoln Pkwy And Middle School Access | TWSC | B(B) | B(B) |
| Lincoln Pkwy And East School Access | TWSC | C(B) | C(B) |
| Greenvale Ave and Lincoln St | AWSC | A(A) | A(A) |
| Greenvale Ave and Spring Street | AWSC | B(B) | B(B) |



Corridor Performance

EXISTING CORRIDOR EVALUATION

VEHICLE

- Back-ups from school pick-up/drop-off activities spill out onto Lincoln Parkway
- Generally good traffic flow throughout the rest of the day



BICYCLE

- No existing dedicated bicycle facilities



GOOD

FAIR

POOR

PEDESTRIAN

- Existing sidewalks on Lincoln Parkway and Dresden Avenue provide dedicated walking spaces
- Sidewalks only present on one side of the street in some areas



BIKE LEVEL OF TRAFFIC STRESS

1



Strong separation from all except low speed, low volume traffic. Simple crossings. Suitable for children.



2



Separate lane limits traffic interaction to crossings easy for adults to negotiate. Tolerated by "interested but concerned" bicyclists.



3



Narrow bicycle lane. Interaction with moderate speed or multi-lane traffic and parked vehicles. Tolerated by "enthused & confident" bicyclists.

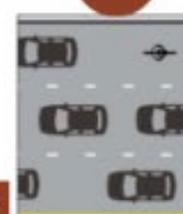


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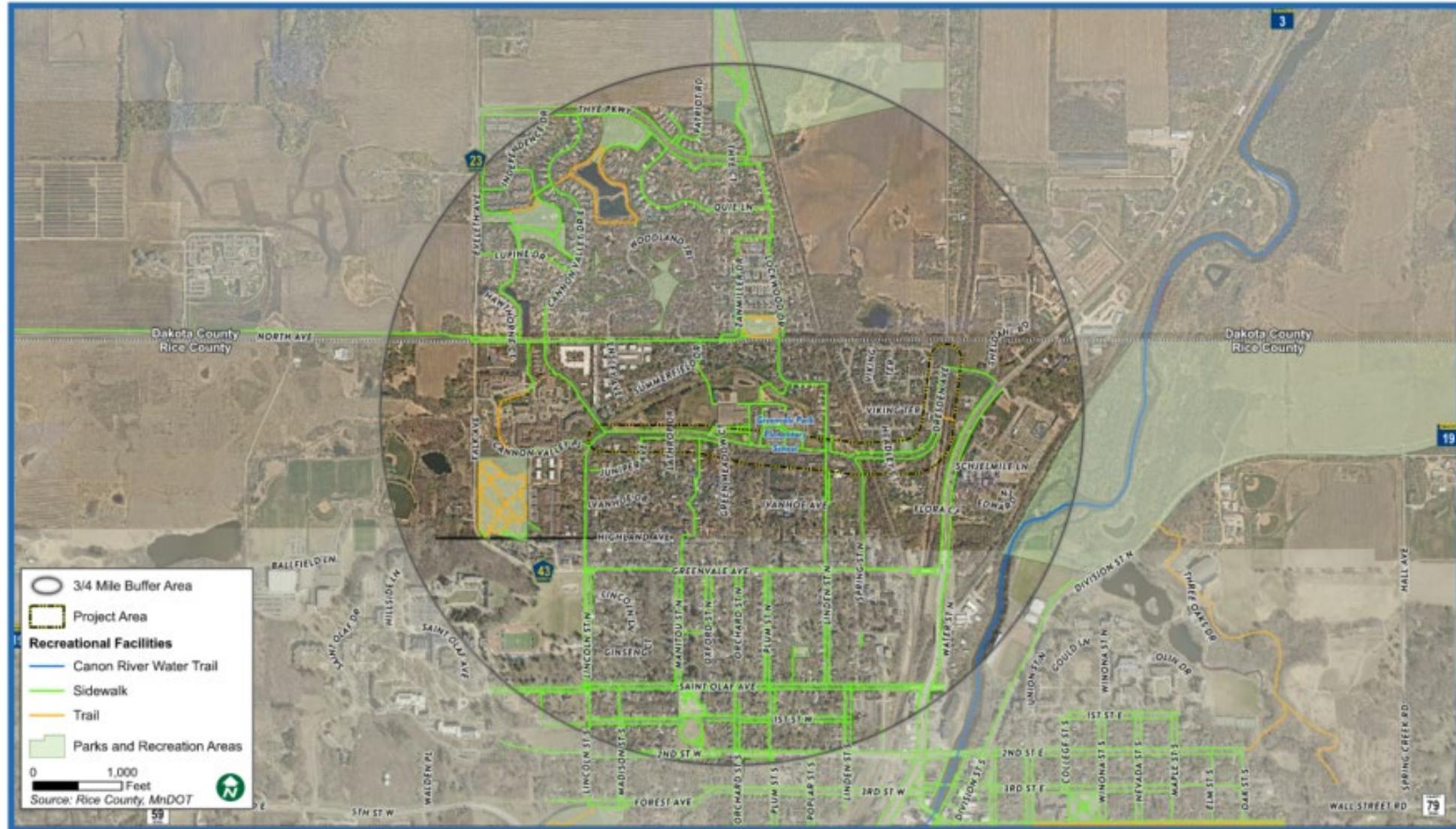


No bicycle lane on a busy street with higher speed traffic. Direct interaction with multi-lane traffic. Tolerated by "strong & fearless" bicyclists.

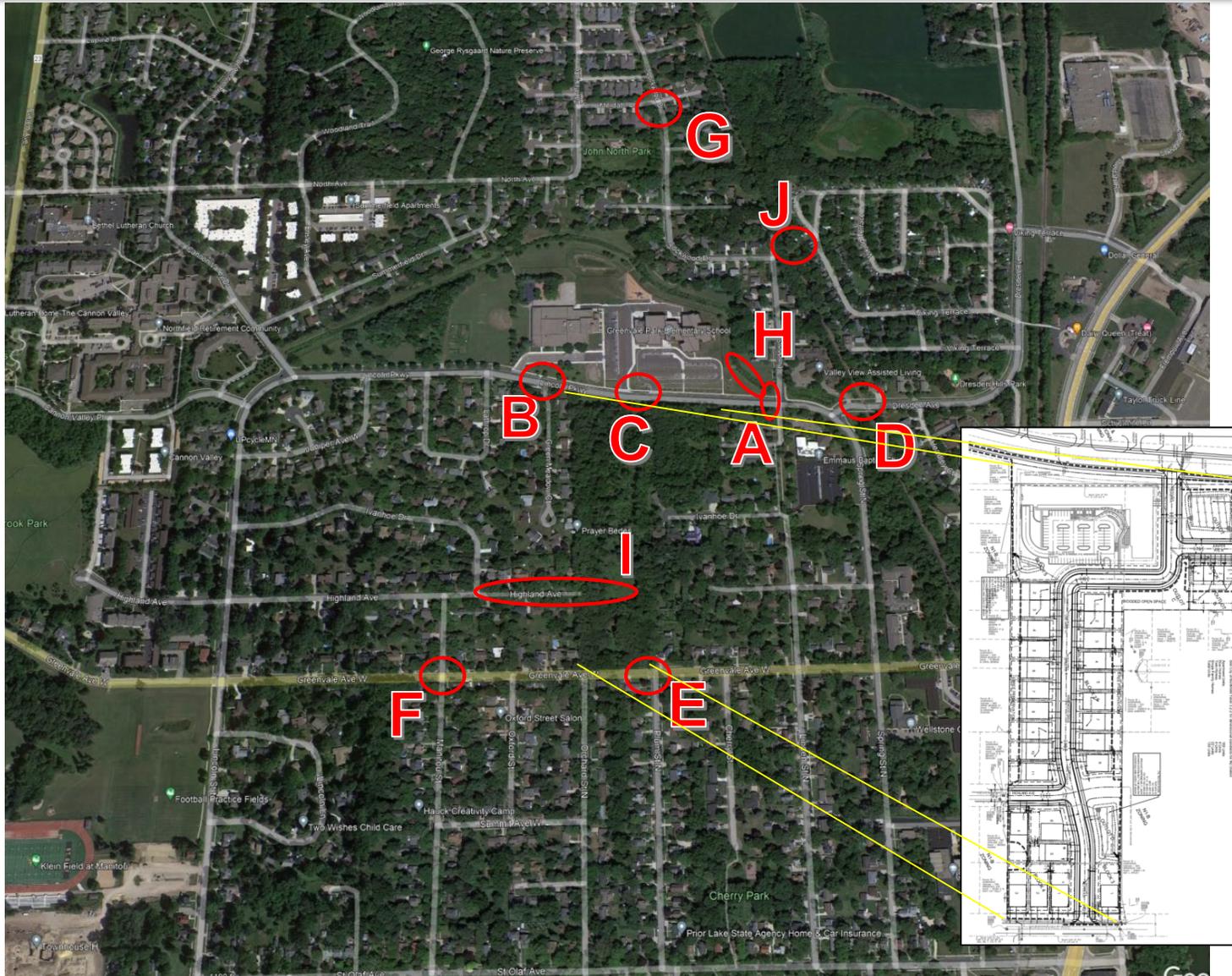
CURRENT BIKE STRESS
IN THE STUDY AREA



Safe Routes to School - School $\frac{3}{4}$ Mile Buffer



School ¾ Mile Buffer Potential Considerations



- A. Curb extensions across Lincoln Pkwy
 - 1. potential RRFB if justified
- B. Potentially remove crosswalk
 - 1. maintain curb cuts
 - 2. potential curb extensions
 - 3. funnel pedestrian traffic to location C
- C. New crosswalk location
 - 1. curb extensions
 - 2. potential RRFB if justified
- D. Improvements across railroad needed
- E. Add marked pedestrian crossing and crossing signage across Greenvale
 - 1. Kraewood connection
- F. Add painted crosswalks
 - 1. all-way stop controlled intersection
- G. Add advanced pedestrian crossing signage
- H. Consider new connection for sidewalk to school
 - 1. worn path today
- I. Consider new sidewalk connection from Ivanhoe to Kraewood development
- J. Consider access across railroad

Upcoming Open House

Wednesday June 28, 2023

- 5:30-7:30 PM

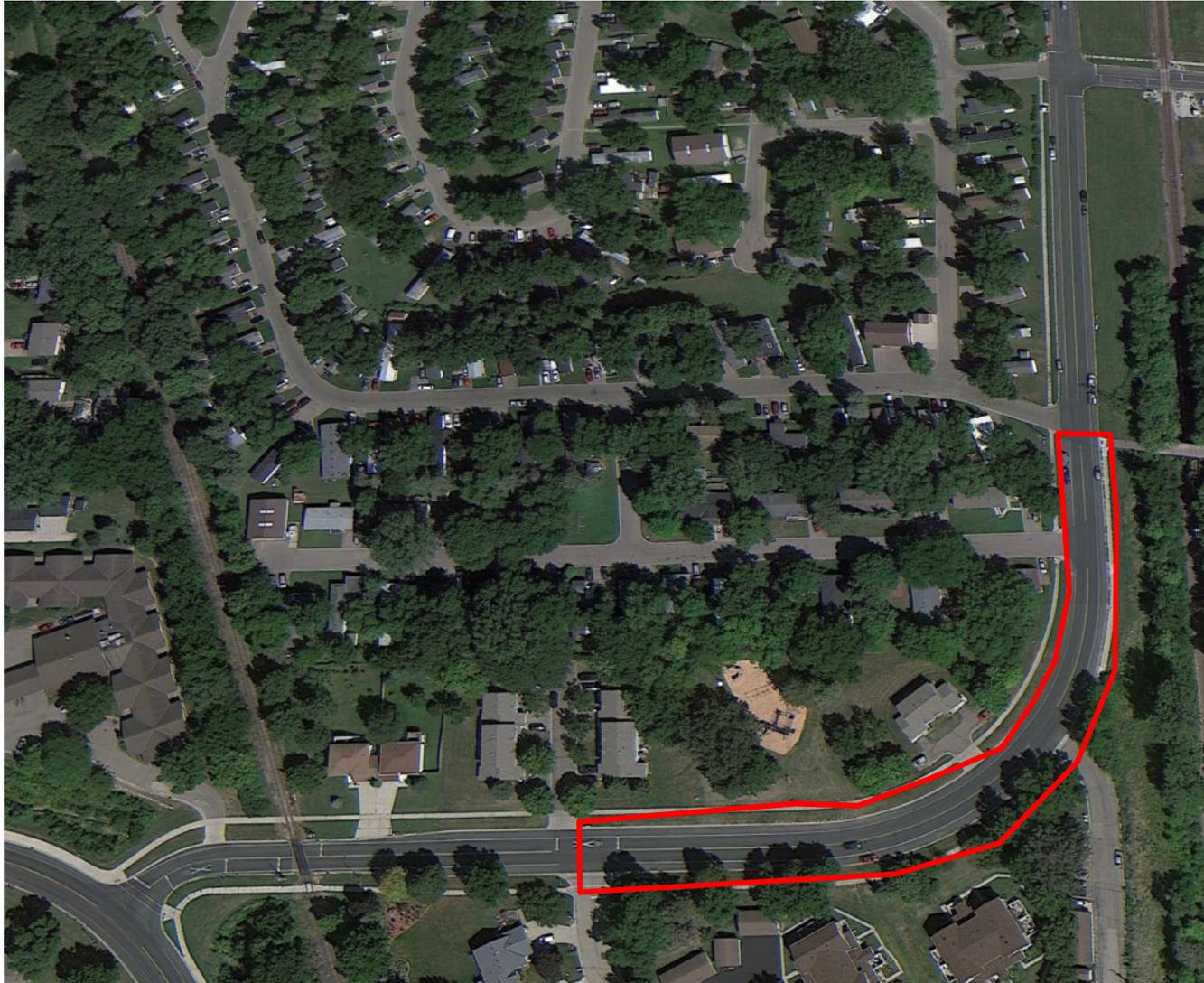
Northfield City Hall, 2nd Floor Training Room

801 Washington Street

Northfield, MN 55057

- Existing Conditions
- Identify Issues/Concerns/Opportunities
- Dresden Avenue Demonstration
- **New information** – Concept layouts

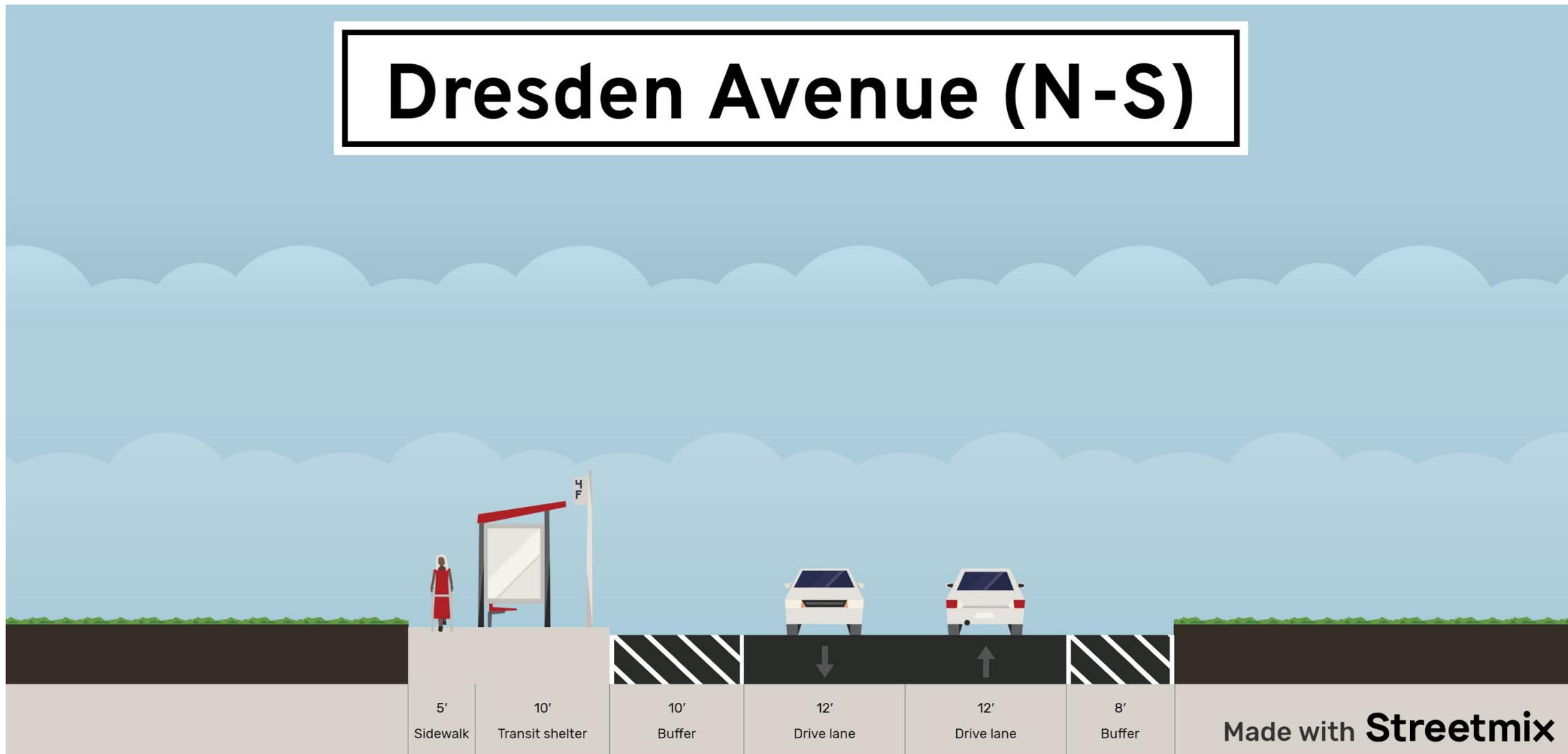
Dresden Avenue Demonstration Project



- A. Avoid impacts to Bus Stop
- B. Avoid bicyclist/bus conflicts
- C. Maintain shoulder for parking on at least one side of the roadway
- D. Maintain existing crossings at the railroad

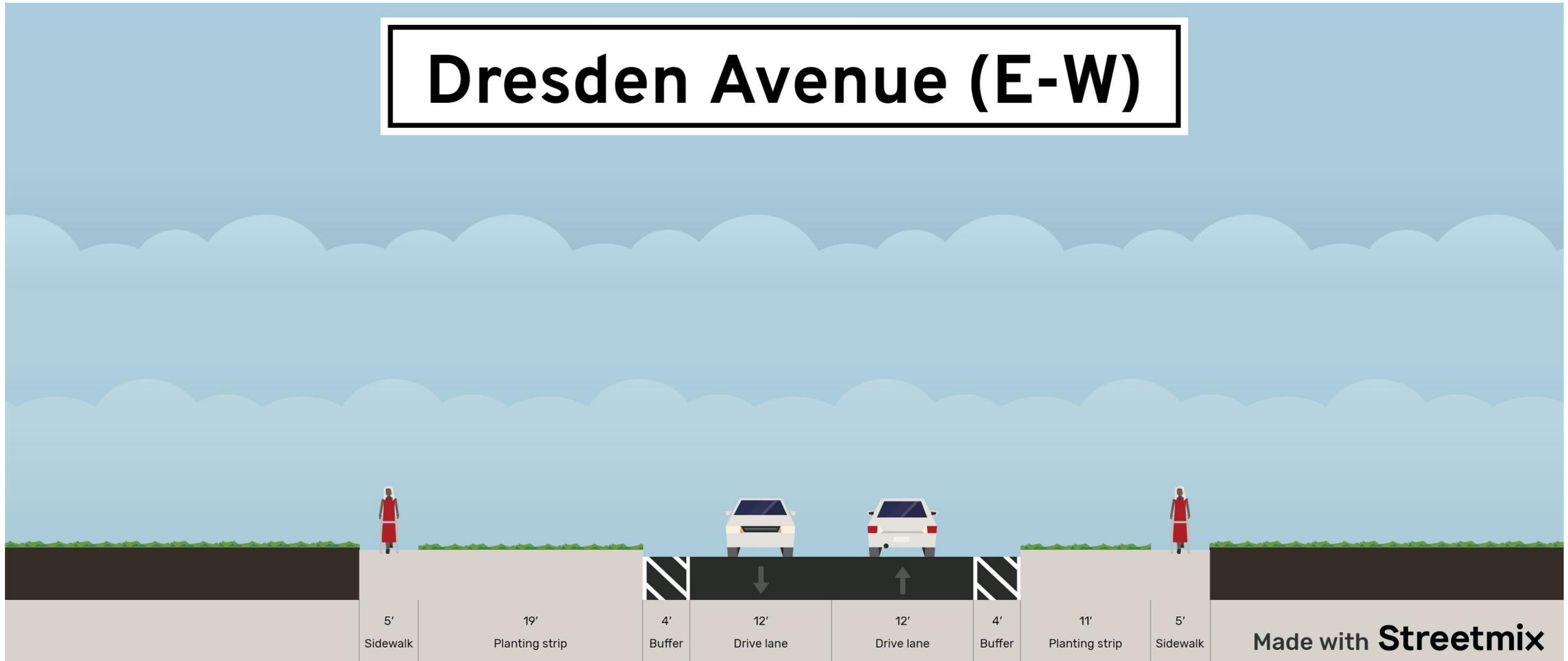
Existing Dresden Avenue – Bus Stop

Dresden Avenue (N-S)



Existing Dresden Avenue – Railroad Crossing

Dresden Avenue (E-W)



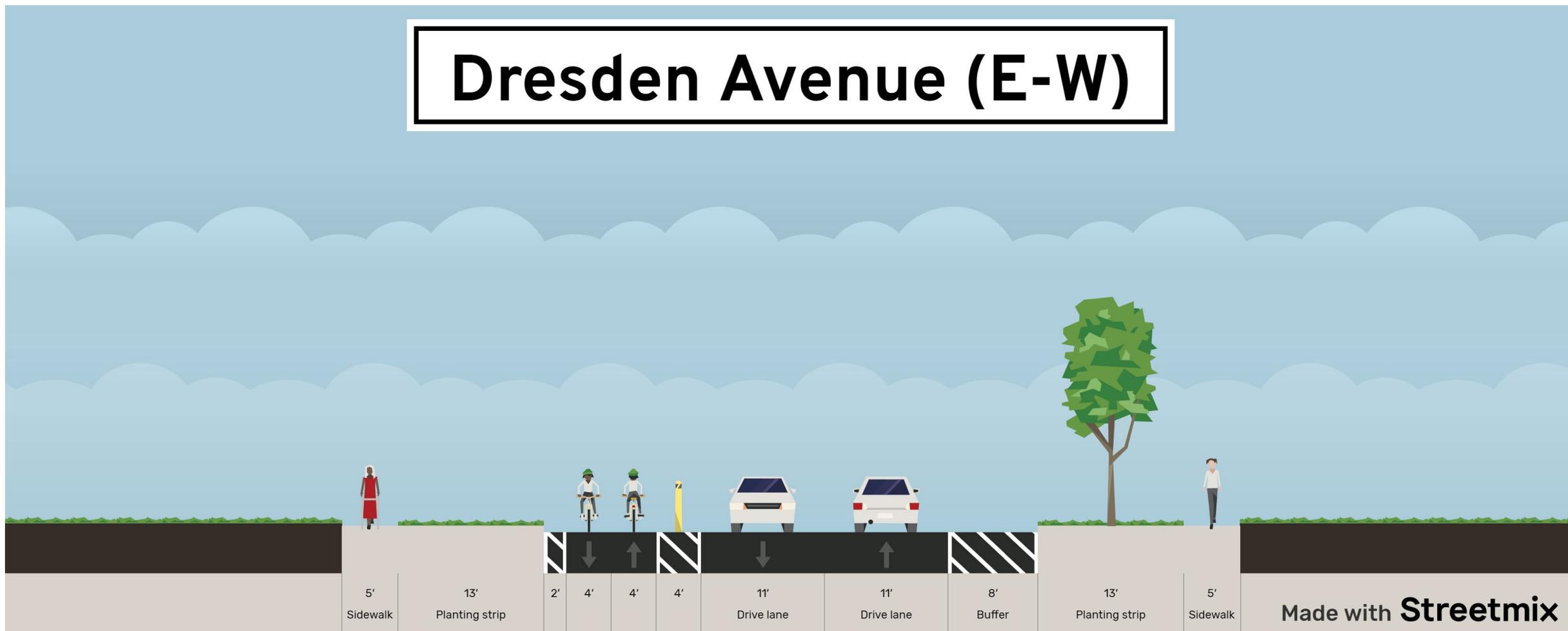
Existing Dresden Avenue

Dresden Avenue (E-W)



Dresden Avenue Demonstration Project

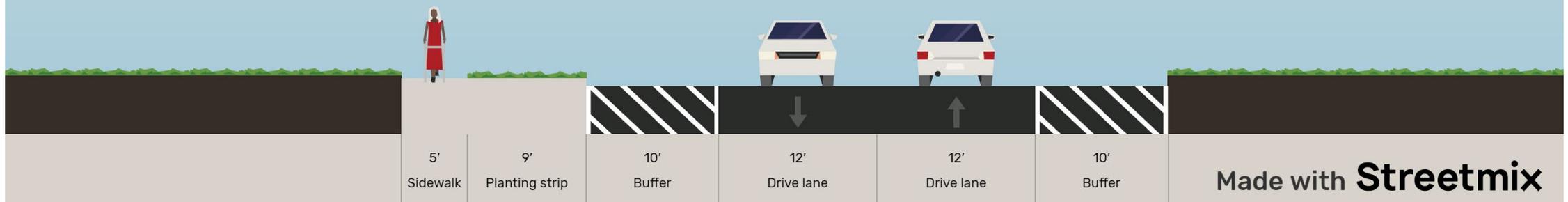
Dresden Avenue (E-W)



The 4' buffer includes delineators and a raised "curb"

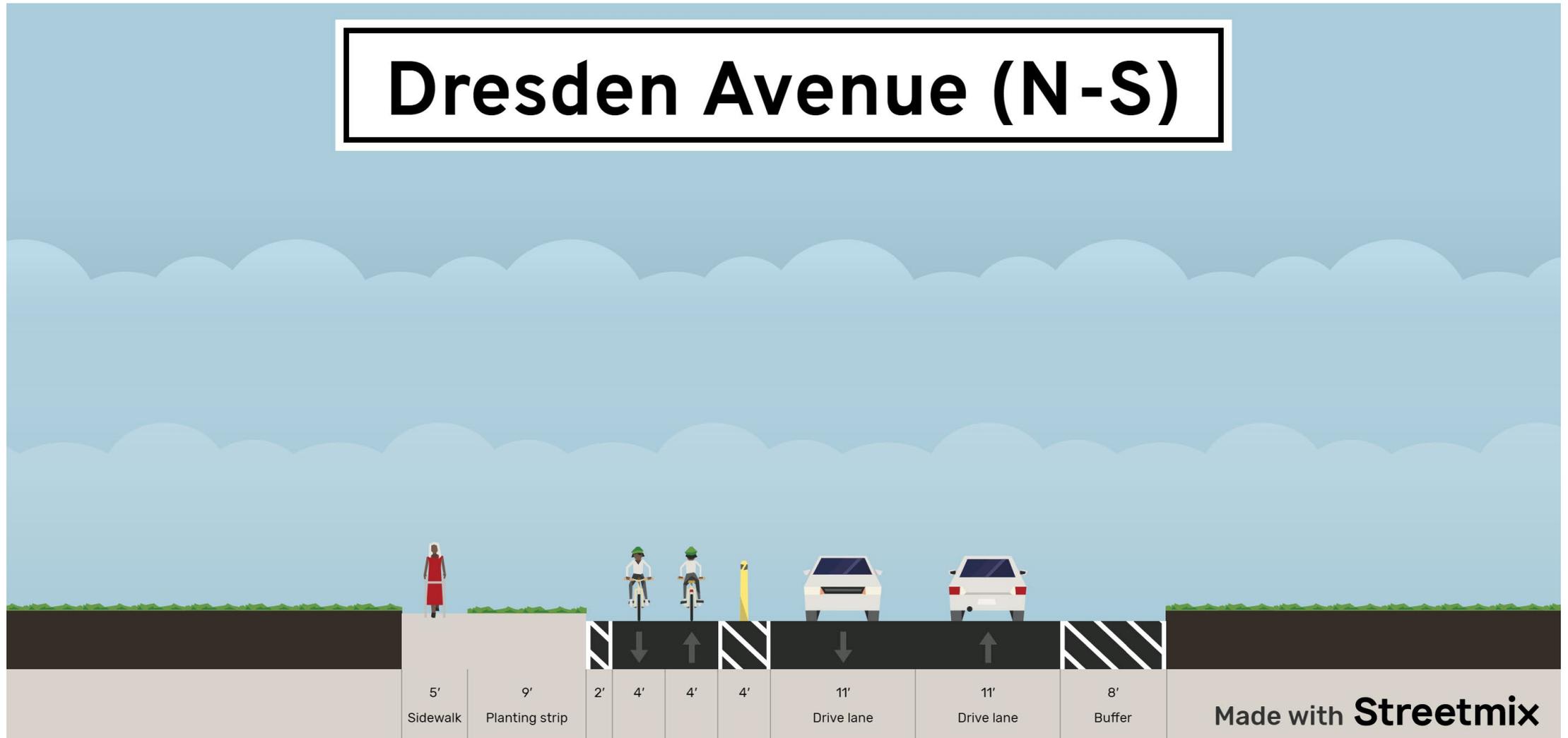
Existing Dresden Avenue

Dresden Avenue (N-S)



Dresden Avenue Demonstration Project

Dresden Avenue (N-S)



The 4' buffer includes delineators and a raised "curb"

Demonstration Project Schedule

July 2023: Order materials

Late July/early August 2023: Construction

August to October 2023: Demonstration

Project Schedule

June 2023: Develop Initial Concepts

July/August 2023: Concept Evaluation

September 2023: Preliminary Recommendations

October/November 2023: Refine Concepts/Additional Evaluation

December 2023/January 2024: Final Recommendations

Questions

