



New Jersey Avenue Corridor Safety Project

October 26th, 2021

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New Jersey Ave NW Schedule

- **Concept Planning**

- Mid City East Livability Study (2013)
- MoveDC (2014)
- MoveDC Update (2021)

- **Traffic Analysis Study (2020/21)**

- **Concept Plan (2021)**

- **ANC 6E Transportation Advisory Committee Meeting**

- **Community Consultation on Design and Engineering (Fall - Winter 2021)**

- **Design (Winter – Spring 2022)**

- **Public Comment Period- 30 business days from NOI (Spring 2022)**

- **Construction (Summer 2022)**

Why is DC Installing Protected Bicycle Lanes?

2005 Bicycle Master Plan Goals

- 2000: 1% of commute trips by bike
- 2010: 3% of commute trips by bike
- 2015: 5% of commute trips by bike



Sustainable DC goals

- 75% of all trips by walk, bike, transit by 2032
- 150 more bike share stations
- Carbon Neutrality by 2050



Vision Zero Goals

- Zero Traffic Fatalities
- Few serious injuries
- Create safe conditions through design
- Safe & accessible streets for all users

Safe Routes to School

- Building Safe Routes



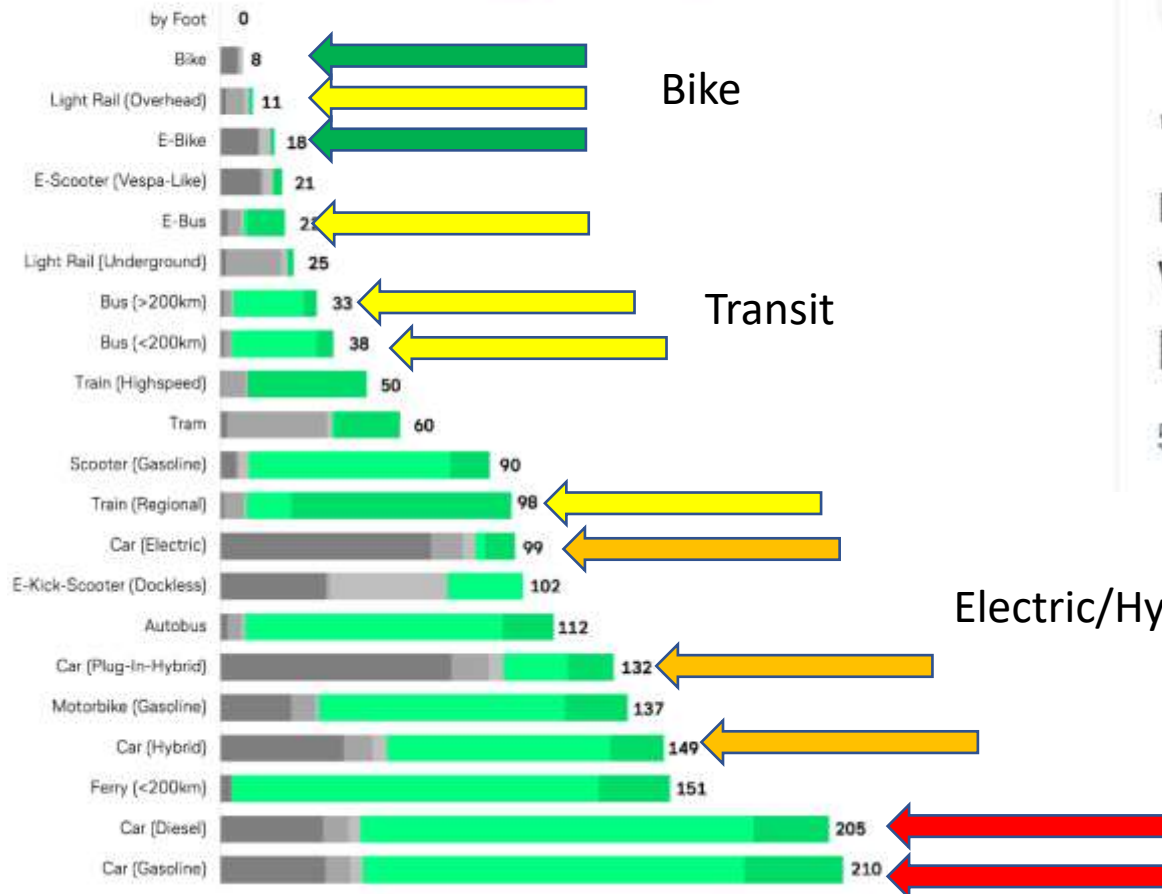
Why Bike Lanes Are Important as a Climate Response

TNMT

Ranking urban transport modes

Average carbon emissions by transport type (in gram per pkm)

■ Manufacture & Disposal ■ Roadway ■ Maintenance ■ Operation (Direct) ■ Operation (Indirect)



Sources: Lufthansa Innovation Hub Analysis, TNMT.com, press and various research studies – see extra Airtable



David Roberts

@drvolts

"Any realistic assessment of what's happening right now -- I don't care what district you are in -- is that what's scientifically necessary exceeds what's politically possible ..."

5:04 PM · Aug 11, 2021 · Twitter Web App

Why Protected Lanes?

New Jersey Ave FUTURE



New Jersey Ave TODAY



**LOW STRESS
TOLERANCE**

**HIGH STRESS
TOLERANCE**

BICYCLIST DESIGN USER PROFILES

**Interested
but Concerned**

51%-56% of the total
population

Often not comfortable with bike lanes, may bike on sidewalks even if bike lanes are provided; prefer off-street or separated bicycle facilities or quiet or traffic-calmed residential roads. May not bike at all if bicycle facilities do not meet needs for perceived comfort.

**Somewhat
Confident**

5-9% of the total
population

Generally prefer more separated facilities, but are comfortable riding in bicycle lanes or on paved shoulders if need be.

**Highly
Confident**

4-7% of the total
population

Comfortable riding with traffic; will use roads without bike lanes.



Mid City East Livability Study

New Jersey Avenue NW

New Jersey Avenue is a designated minor arterial. The corridor presently has four general purpose lanes. On street parking is permitted in the first lane during non-rush periods, however parking is restricted during rush hour in the peak rush direction. The corridor is not as heavily trafficked as other minor arterials in the network and existing and planned traffic volumes could be accommodated in a reduced lane configuration.

Community concerns for the corridor were to improve pedestrian crossings across New Jersey Avenue and provide comfortable accommodation for cycling along it.

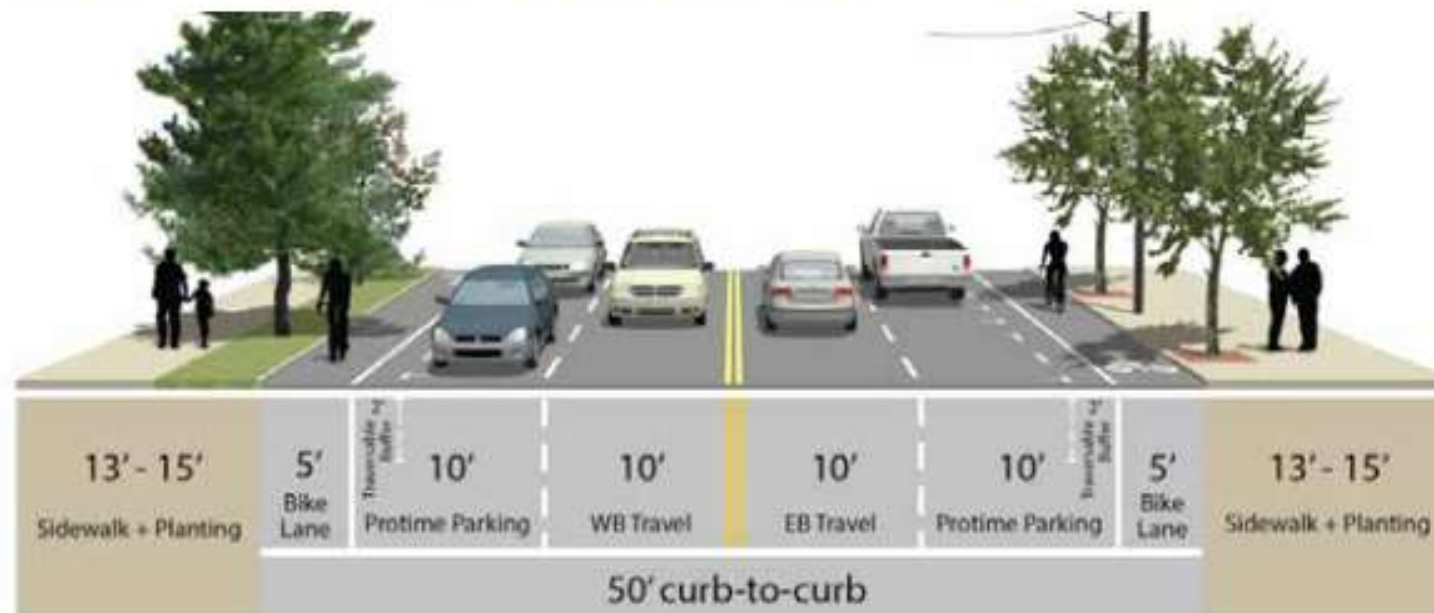
Several different cross sections were considered:

1. Full-time bike lane with a floating buffer and parking allowed during off-peak times. This plan was rejected because the buffer, at only two feet wide, was too narrow to meet DDOT's guidelines, and the project team felt the complexity of this configuration would not be intuitive to drivers parking in the corridor.
2. Road diet with a full time travel lane in each direction, a center turn lane, and bike lanes in either direction. This plan was rejected because it would remove the existing parking from the corridor.

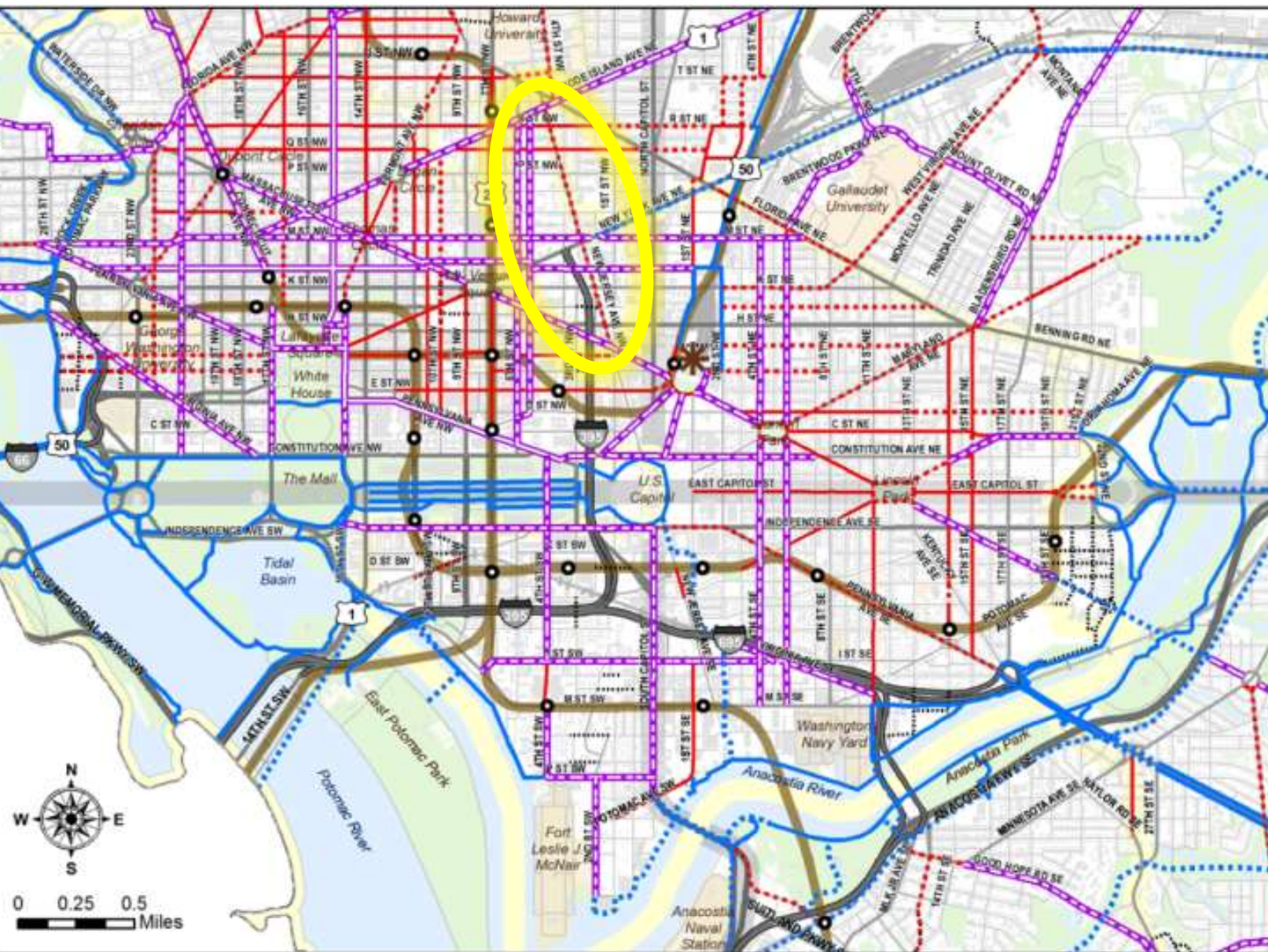
Figure 7-5 Rhode Island Bus/Bike Lane Concept Alternative



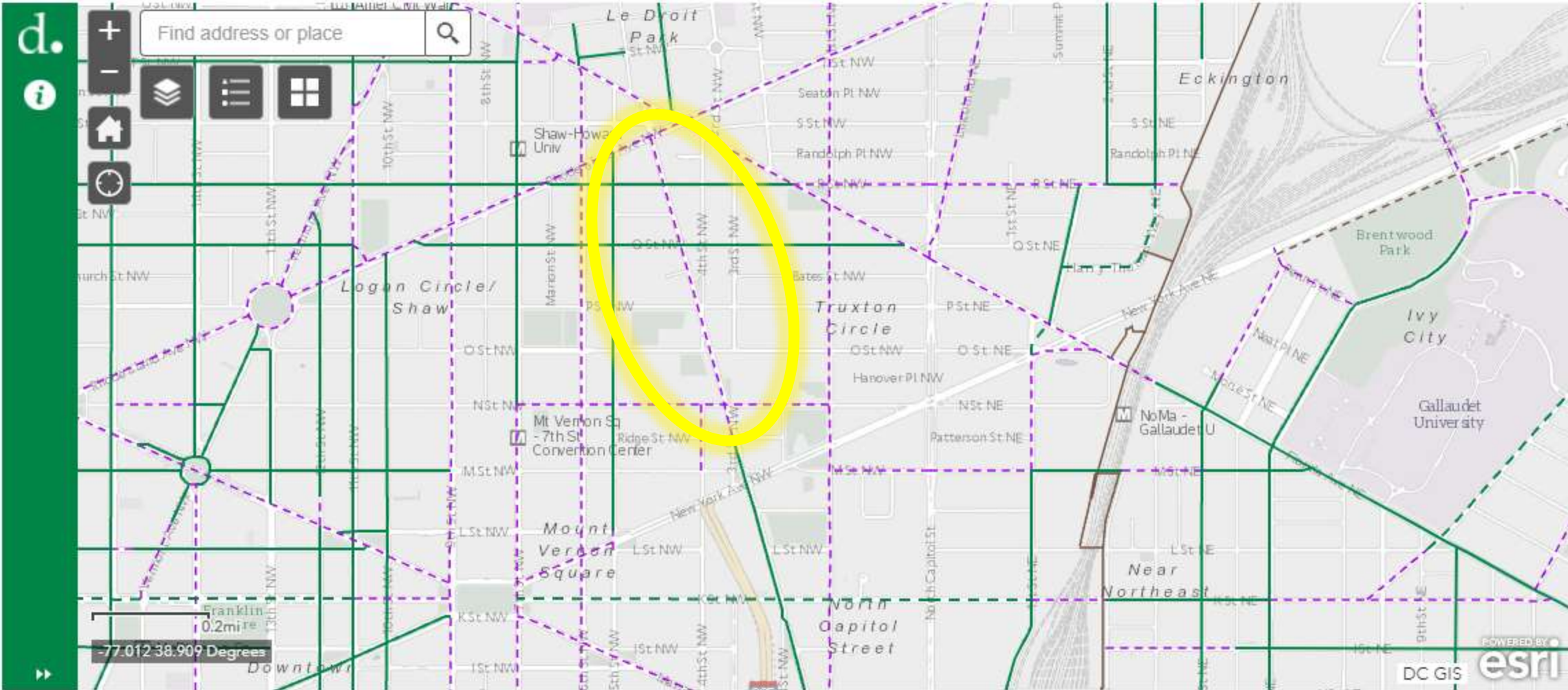
Figure 7-6 New Jersey Avenue Floating Bike Lane Concept Alternative



moveDC Bicycle Plan 2014



moveDC Bicycle Plan 2021



Background



Project Limits: New Jersey Ave NW between Rhode Island Avenue and N St NW

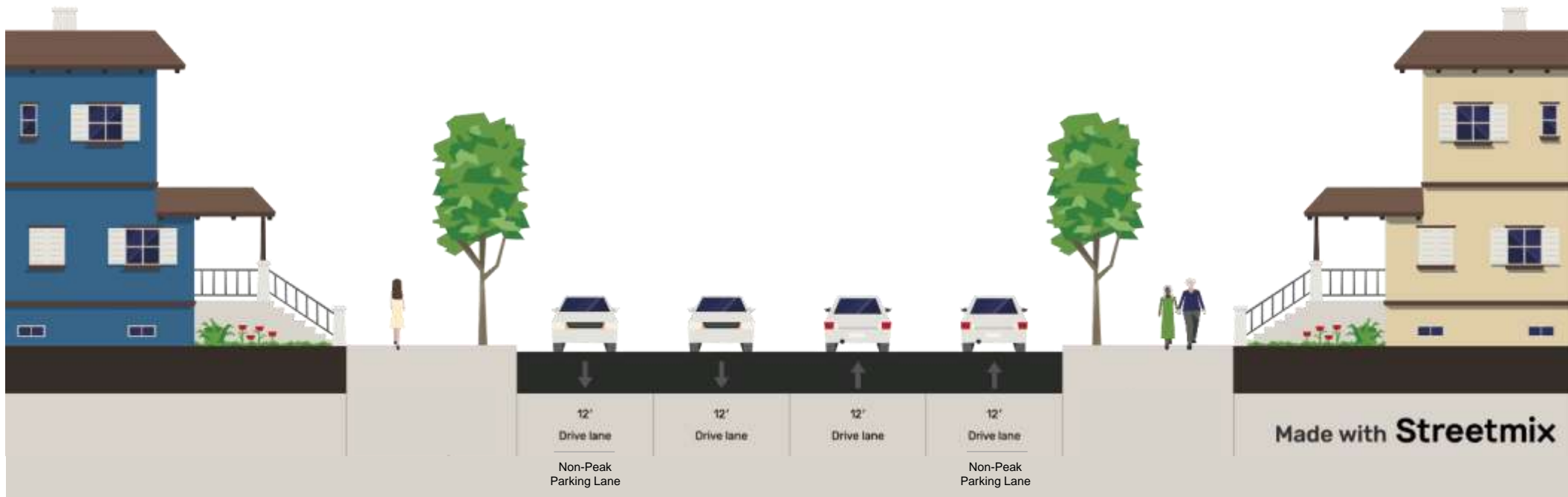
- ☐ Wide lanes and high speeds along New Jersey Avenue
- ☐ Significant number of angle crashes at New Jersey Avenue and O Street intersection
- ☐ Frequent bus stops (7 Metrobus stops along corridor)
- ☐ High pedestrian activity (mostly residential area, mixed use at Rhode Island Avenue)
- ☐ Missing connections in the bicycle network

Existing Conditions – Roadway Characteristics

Functional classification: minor arterial (AADT ~ 14,000)

Lane configuration: 48-ft wide 4-lane roadway with peak hour parking restrictions

Posted speed limit: 25 MPH



Existing Conditions – Street View

New Jersey Ave & O St



New Jersey Ave & P St



Existing Conditions - Street View

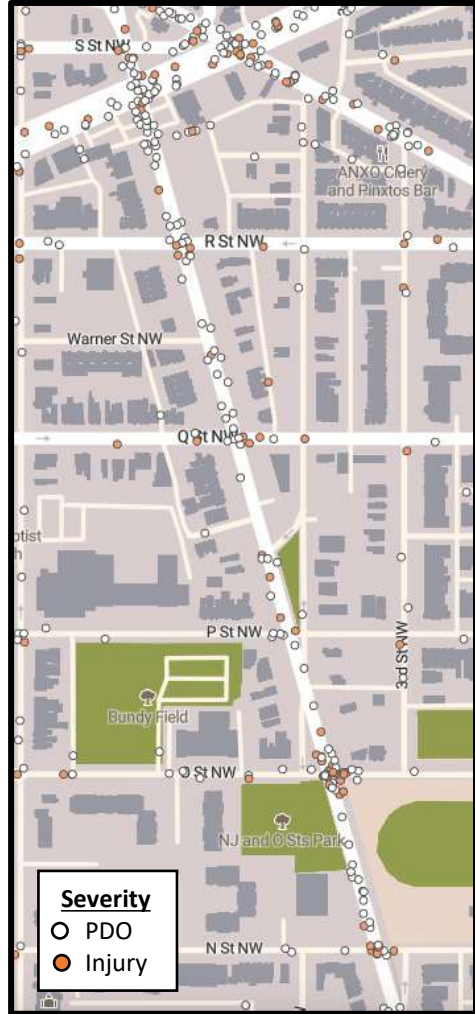
New Jersey Ave & Warner St



New Jersey Ave & R St



Crash History (2018-2020)




Intersection with New Jersey Avenue NW	Crash Types										
	Right Angle	Left Turn	Right Turn	Rear End	Side Swiped	Head- On	Parked	Fixed Obj.	Backing	Non- Motorist	Total per Location
Rhode Island Avenue	5	6	4	15	14	0	1	0	2	1	48
R Street	1	3	0	7	3	0	0	0	0	4	18
Warner Street	0	1	0	3	0	0	2	0	1	1	8
Q Street	1	1	1	6	4	0	0	0	0	1	14
Franklin Street	0	1	0	2	1	0	1	1	0	0	6
P Street	1	0	0	5	1	0	1	1	0	1	10
O Street	26	3	0	6	4	0	0	2	0	1	42
N Street	6	1	0	10	9	0	0	0	0	0	26
Total per Crash Type	40	16	5	54	36	0	5	4	3	9	172







Crash History (cont'd)

- ❑ **Rear-end** crashes are the most common crash type, accounting for 31% of all crashes
 - Citywide average: 22.2%
 - Common causes: inattention and abrupt stopping, speeding
- ❑ **Right angle** crashes are the second most common crash type, accounting for 23% of all crashes
 - Citywide average: 4%
 - Common causes: poor visibility from side-street approaches, speeding
- ❑ **Side swipe** crashes are the third most common crash type, accounting for 21% of all crashes
 - Citywide average: 21.4%
 - Common causes: unsafe lane changes or parking maneuvers
- ❑ Locations with highest density of crashes:
 - Rhode Island Avenue intersection: rear-end and side swipe crashes (mainly along Rhode Island Avenue)
 - O Street intersection: angle crashes (b/w O Street approaches and New Jersey Avenue)

Roadway Reconfiguration – a Proven Safety Countermeasure

 U.S. Department of Transportation
Federal Highway Administration

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FHWA Home / Safety / Road Diets (Roadway Reconfiguration)

Guidance and Policies

Newsletter

Case Studies

Resources

Program Contact

Becky Crowe
rebecca.crowe@dot.gov
(202) 507-3699

Road Diets (Roadway Reconfiguration)


FHWA is offering State DOT's **FREE** Road Diet related Technical Assistance. This assistance includes any activities that advance Road Diets within your state. As examples, technical assistance requests may include:

- Reviewing State's Draft Road Diet policy or guidance documents;
- Development of a Road Diet presentation aimed at either leadership or the general public;
- Animations demonstrating how Road Diets improve safety;
- Providing design guidance about unusual Road Diet configurations;
- Providing examples of other Road Diets around the country that are similar to the requestor's Road Diet; and
- Providing guidance about Road Diet implementation including selecting candidate locations, capacity constraints, public outreach response, evaluation metrics, EMS, slow moving vehicles, cost, or funding.

Lastly, FHWA is also offering FREE Road Diet workshops. Find out more about them [here](#).

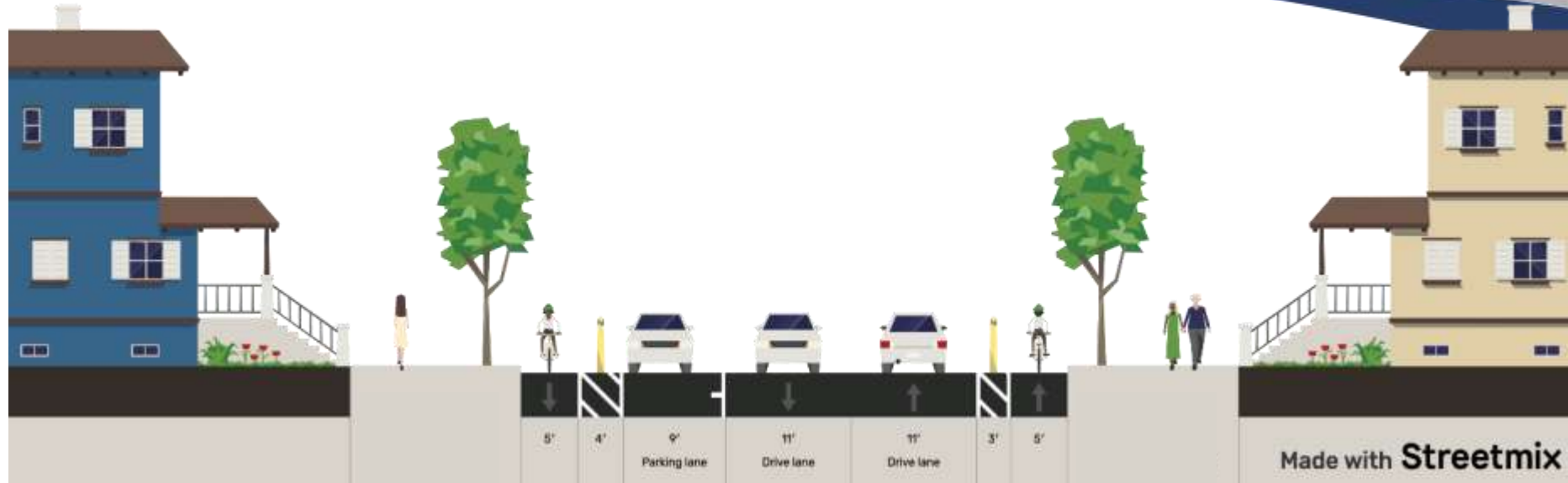
A roadway reconfiguration known as a Road Diet offers several high-value improvements at a low cost when applied to traditional four-lane undivided highways. In addition to low cost, the primary benefits of a Road Diet include enhanced safety, mobility and access for all road users and a "complete streets" environment to accommodate a variety of transportation modes.

A classic Road Diet typically involves converting an existing four-lane

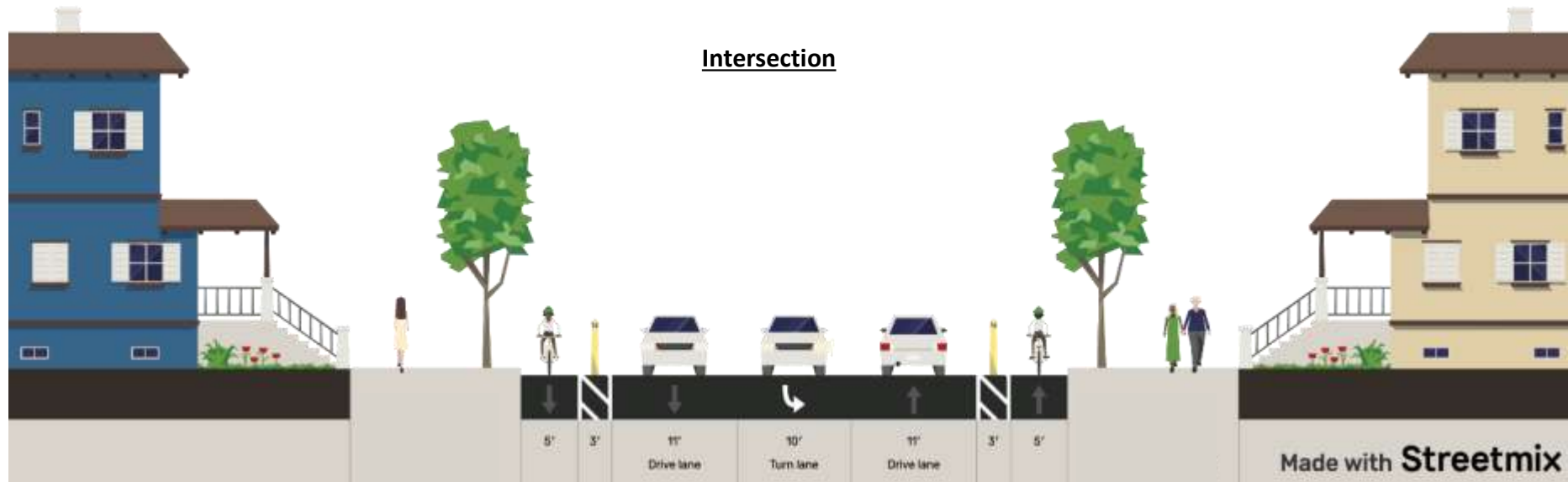


Lane Reduction Proposed Cross Section

Mid-Block

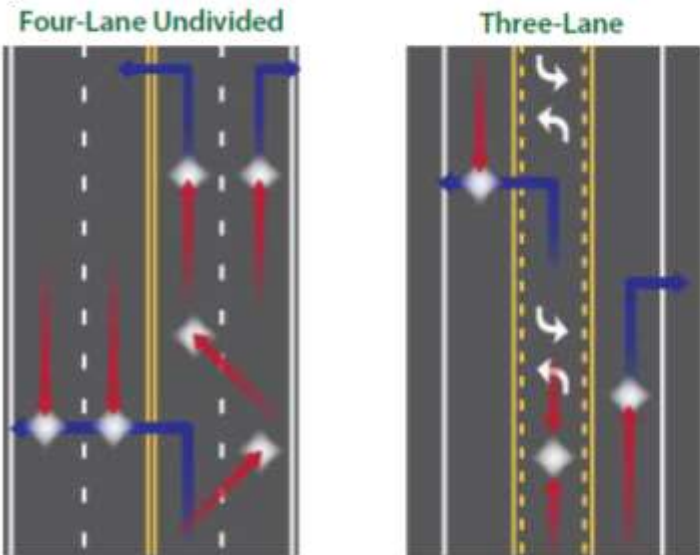


Intersection



Why Are “Road Diets” Safer for All User?

Figure 4. Mid-Block Conflict Points for Four-Lane Undivided Roadway and Three-Lane Cross Section



(Adapted from Welch, 1999)

Figure 5. Crossing and Through Traffic Conflict Points at Intersections for a Four-Lane Undivided Roadway and Three-Lane Cross Section

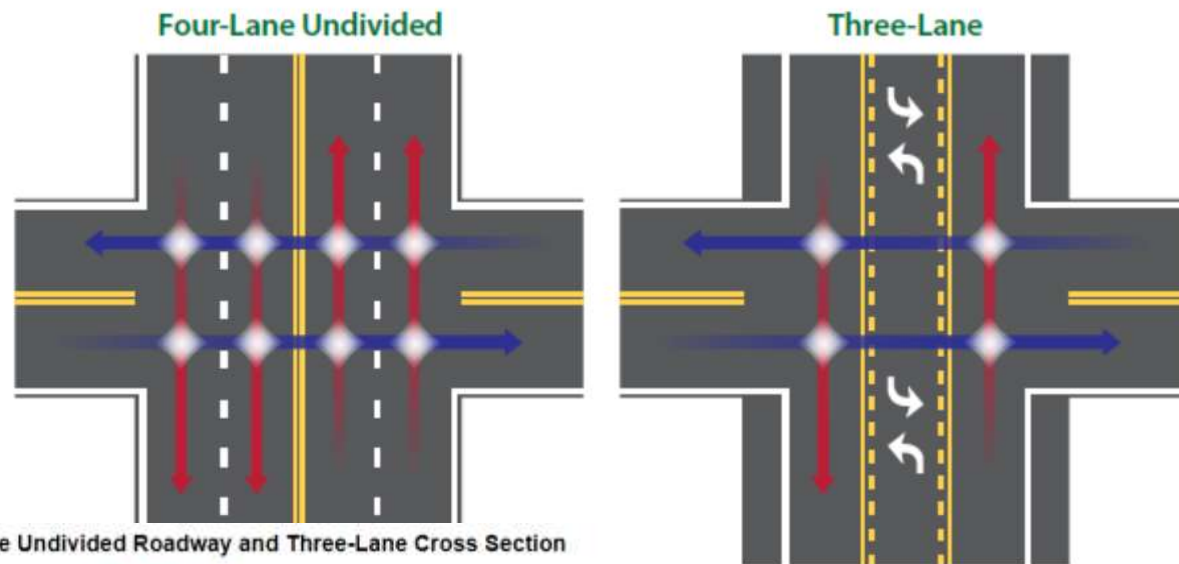
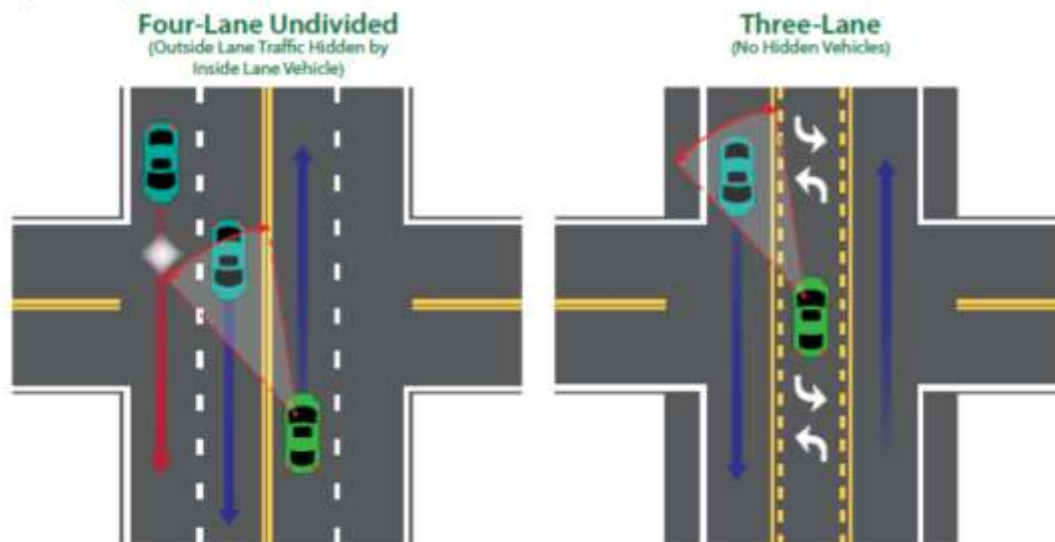
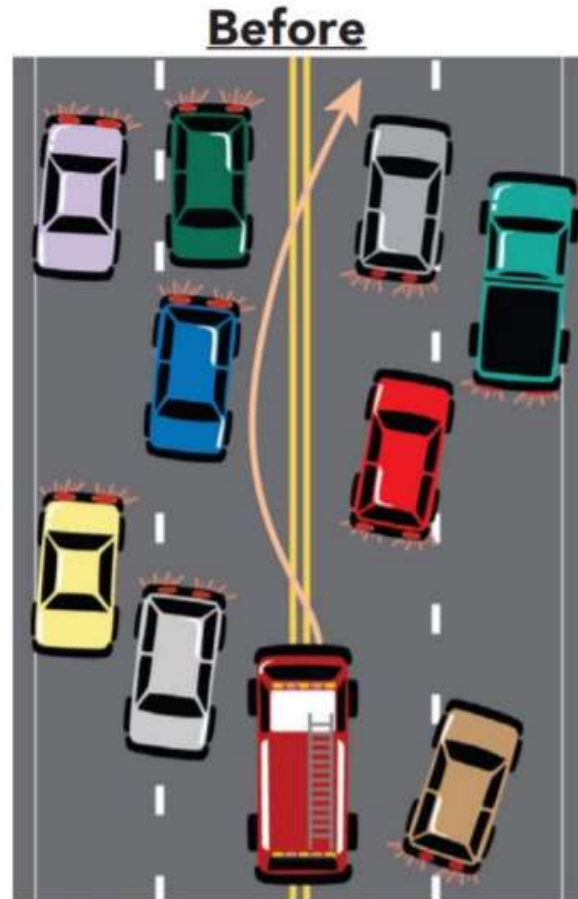


Figure 6. Major-Street Left-Turn Sight Distance for Four-Lane Undivided Roadway and Three-Lane Cross Section

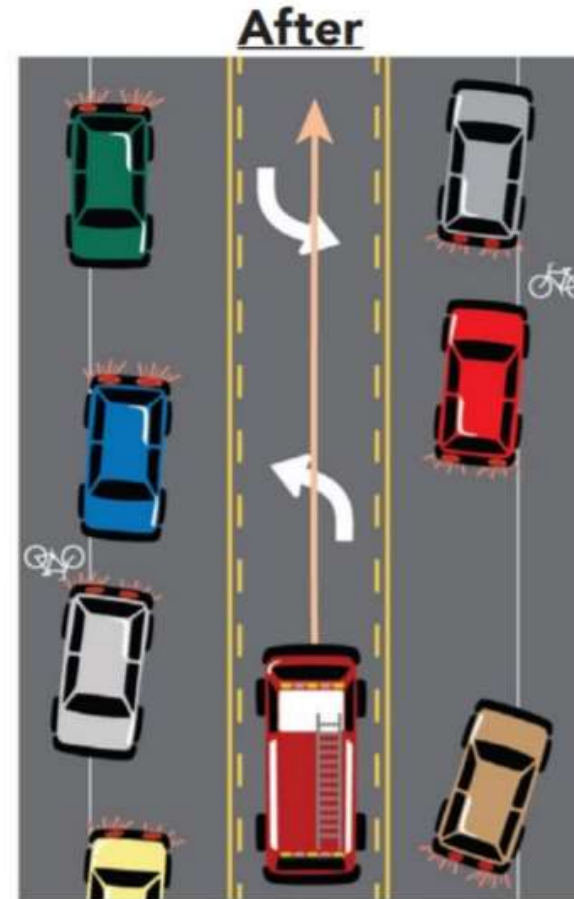


(Adapted from Welch, 1999)

Fire /EMS Access After Road Diet



A fire truck struggling to find a path.



An easily navigable two-way left-turn lane.

Road Diet Overview

- ❑ Single lane in each direction along New Jersey Avenue (with turn pockets at intersections)
- ❑ O Street intersection: side street turn restrictions and Full signal (long-term)
- ❑ PBL that connects bike lanes on New Jersey Avenue, south of N Street to bike lanes on R Street and Q Street
- ❑ Bike lane connection to Florida Avenue via New Jersey Avenue/S Street triangle
- ❑ Shorter crossing distance via pedestrian refuges at Warner Street
- ❑ Lower speeds along New Jersey Avenue due to narrowed lanes
- ❑ Estimated parking impacts
 - Existing ~ 78 unmarked peak-hour restricted spaces (non-compliant with DEM Standards)
 - Proposed ~ 18 marked full-time spaces (compliant with DEM Standards)

Proposed Improvements – O Street

Interim Improvements

- ☐ Install full color traffic signal and restore restricted movements

Future Improvements

- ☐ Implement lane reduction

DRAFT

NEW JERSEY AVE NW

FLORIDA AVE NW

S ST NW


11' 10' 11'

TREE TO BE REMOVED FOR CATCH BASIN

3	0.2	STP - 2016 (S46)
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DISTRICT DEPARTMENT OF TRANSPORTATION
INFRASTRUCTURE PROJECT MANAGEMENT DIVISION



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PROJECT MGR.	CM
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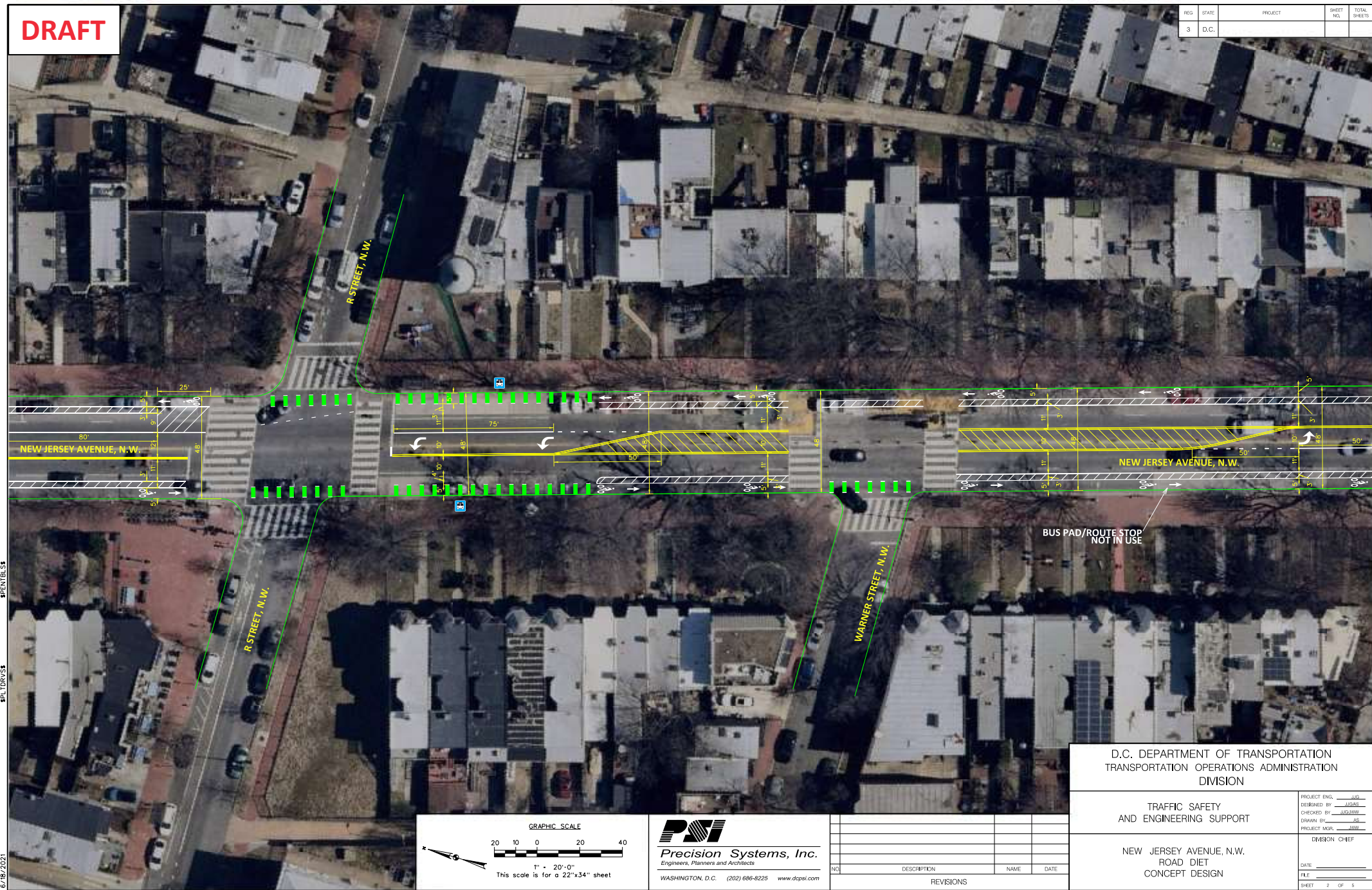


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D.C. DEPARTMENT OF TRANSPORTATION
TRANSPORTATION OPERATIONS ADMINISTRATION
DIVISION

TRAFFIC SAFETY
AND ENGINEERING SUPPORT

NEW JERSEY AVENUE, N.W.
ROAD DIET
CONCEPT DESIGN

PROJECT ENG. JIG
DESIGNED BY JIGAS
CHECKED BY JIG/WWW
DRAWN BY AS
PROJECT MGR. WWW

DIVISION CHIEF

DATE _____

FILE _____

SHEET 2 OF 5



Precision Systems, Inc.
Engineers, Planners and Architects

WASHINGTON, D.C. (202) 686-8225 www.dcpsi.com

REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
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DIVISION


TRAFFIC SAFETY
AND ENGINEERING SUPPORT

NEW JERSEY AVENUE, N.W.
ROAD DIET
CONCEPT DESIGN

PROJECT ENG.	UG
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DRAWN BY	AS
PROJECT MGR.	JWW

DIVISION CHIEF	
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SHEET	4 OF 5

GRAPHIC SCALE



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This scale is for a 22"x34" sheet

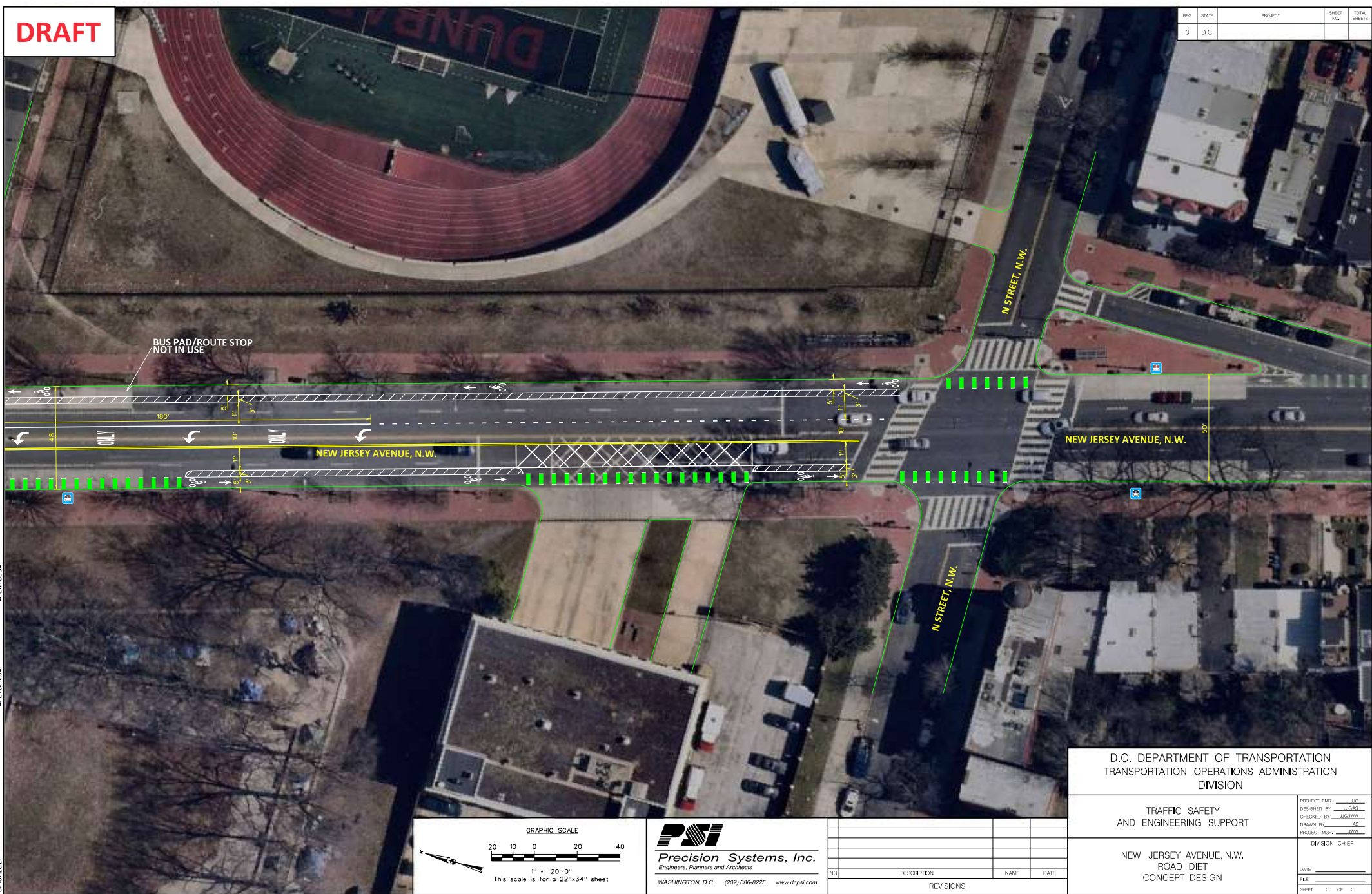


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NO	DESCRIPTION	NAME	DATE
REVISIONS			

REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
3	D.C.			



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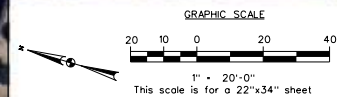
D.C. DEPARTMENT OF TRANSPORTATION
TRANSPORTATION OPERATIONS ADMINISTRATION
DIVISION

TRAFFIC SAFETY
AND ENGINEERING SUPPORT

NEW JERSEY AVENUE, N.W.
ROAD DIET
CONCEPT DESIGN

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CHECKED BY	<u>JUG/NNI</u>
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PROJECT MGR.	<u>NNI</u>

DIVISION CHIEF	
DATE	_____
FILE	_____
SHEET	5 OF 5



Precision Systems, Inc.
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District Department of Transportation