BICYCLE LTS & CONNECTIVITY ANALYSIS

October 21, 2019

PRESENTED TO:
APA PA Annual Conference

PRESENTED BY:
Sarah Moran, AICP

DELAWARE VALLEY dvrpc REGIONAL PLANNING COMMISSION

Why?

Method

Live Demo

BICYCLE LTS & CONNECTIVITY ANALYSIS

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Project Overview

Project Partner: Southeastern Pennsylvania Suburban Bike Lanes Working Group

Goal: Identify which road segments would have meaningful impacts on low-stress bicycle connectivity and would be worth investing in design

Deliverable: Maps as resource for developing bike plans and identifying priorities for capital improvements

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Level of Traffic Stress (LTS)

LTS	Comfortable Enough For (Cyclist Type)	Characteristics
1	Most People	Lowest stress Comfortable for most ages and abilities
2	Interested, but Concerned	Suitable for most adults Presenting little traffic stress
3	Enthused and Confident	Moderate traffic stress Comfortable for those already biking in American cities
4	Strong and Fearless	High traffic stress Multilane, fast moving traffic

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Mekuria, M., Furth, P. and Nixon, H. "Low-stress bicycling and network connectivity", *Mineta Transportation Institute*, No. Report 11-19, 2012.
Geller, R. "Four Types of Cyclists," Portland Bureau of Transportation, Portland, OR, 2006. www.portlandoregon.gov/transportation/article/264746. Accessed Aug, 11, 2016.


Century 21
715-
4176
Con-way
FREIGHT
STERLING

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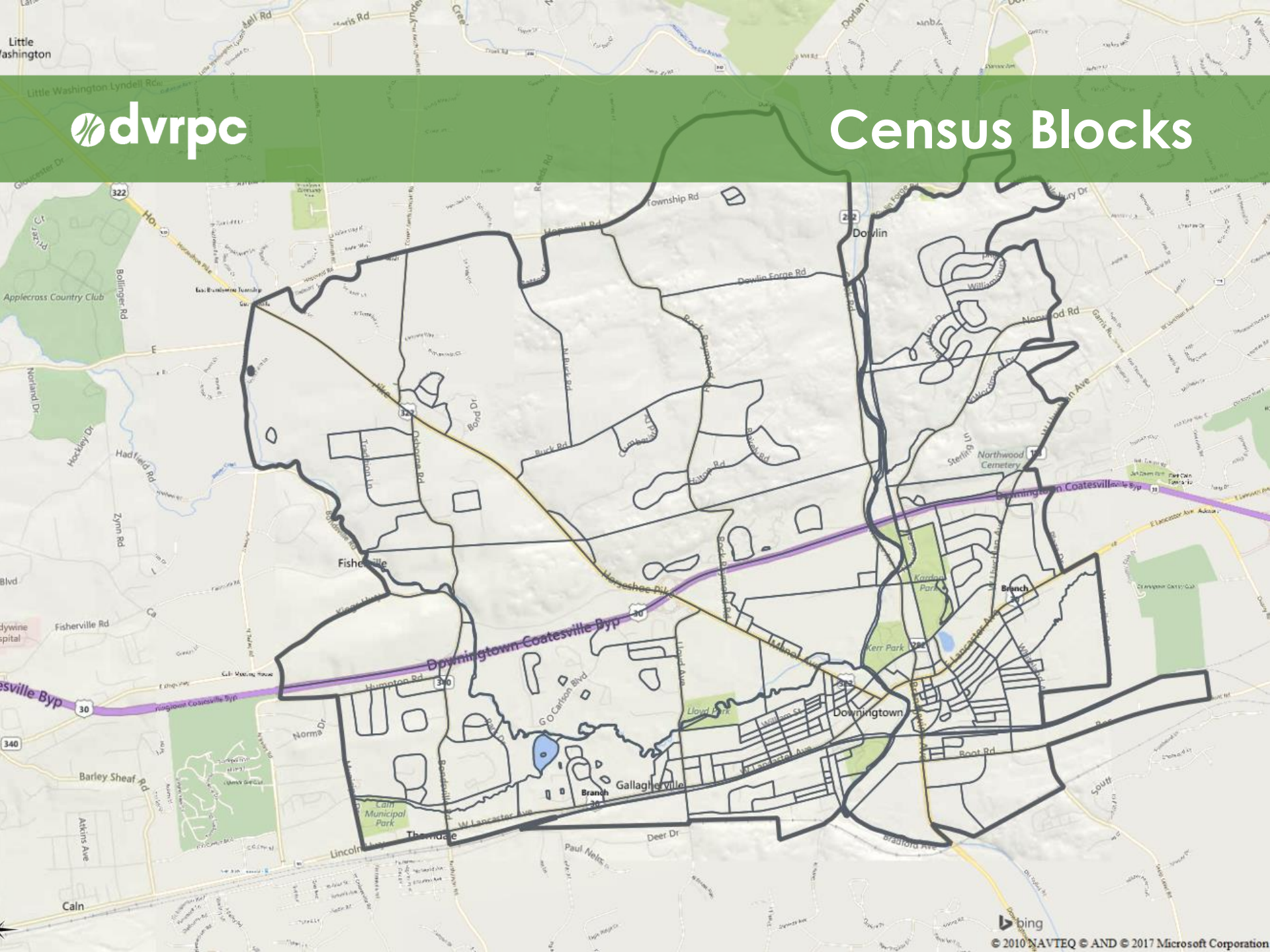
Census Blocks



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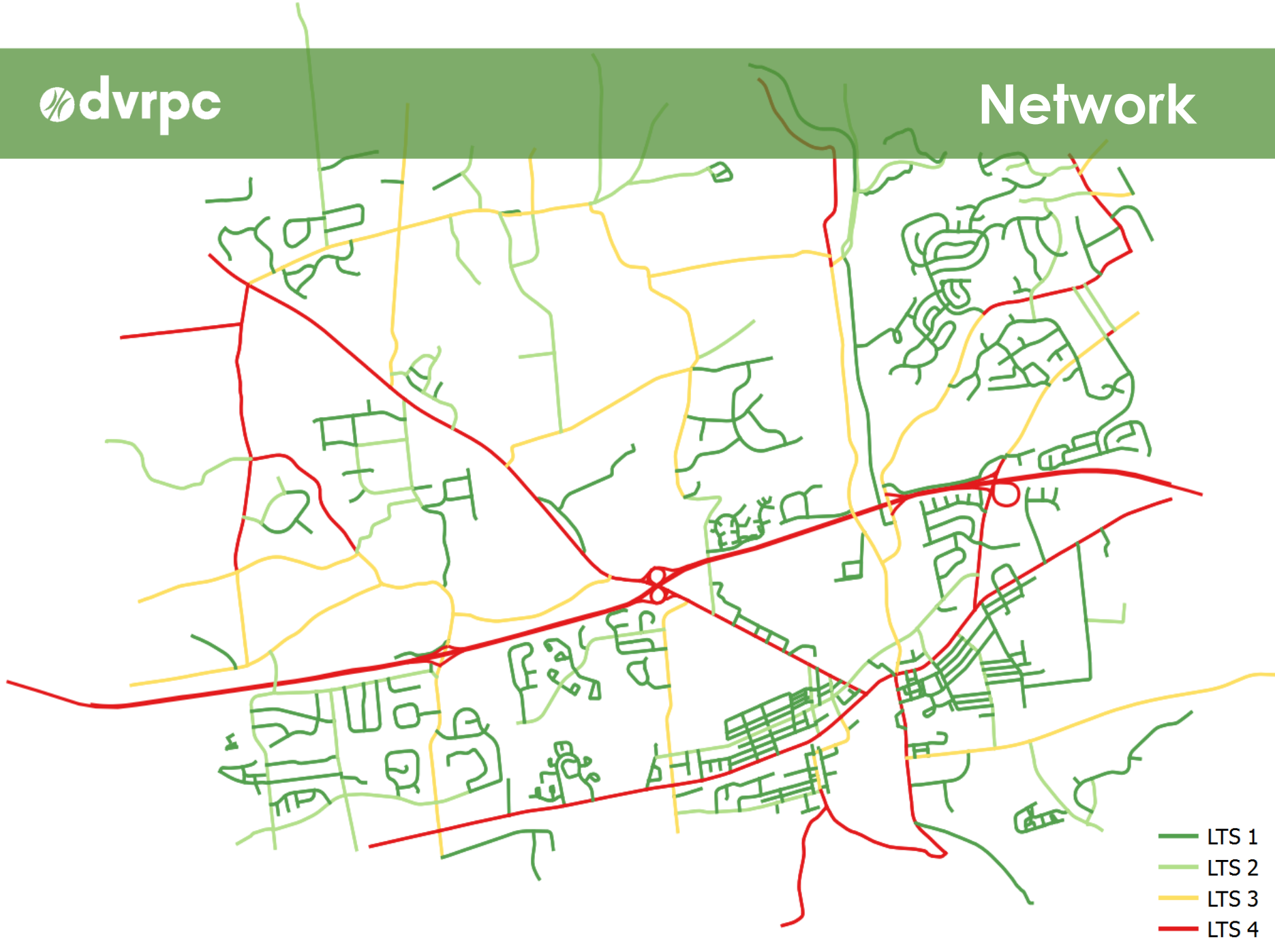
Network



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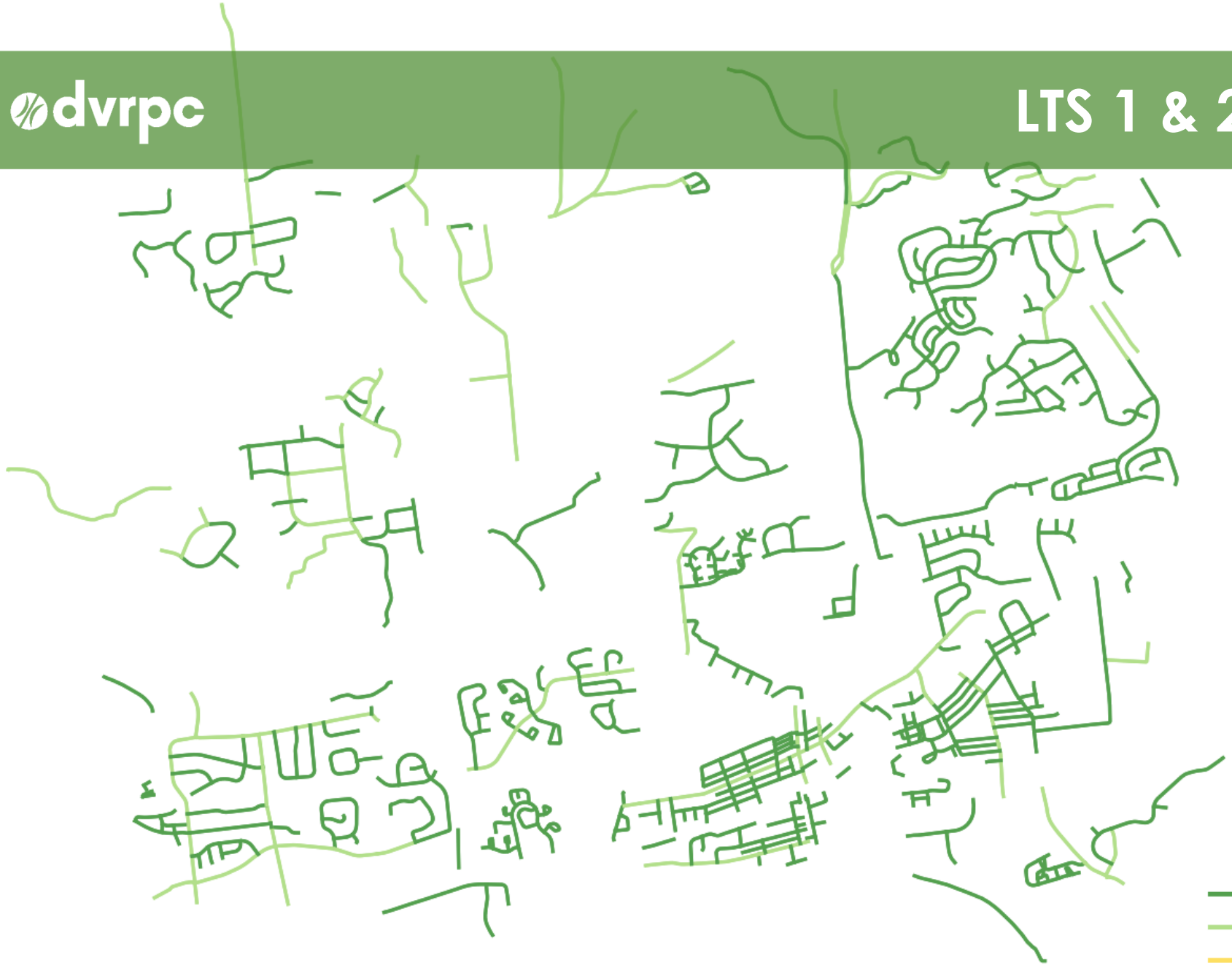
LTS 1 & 2



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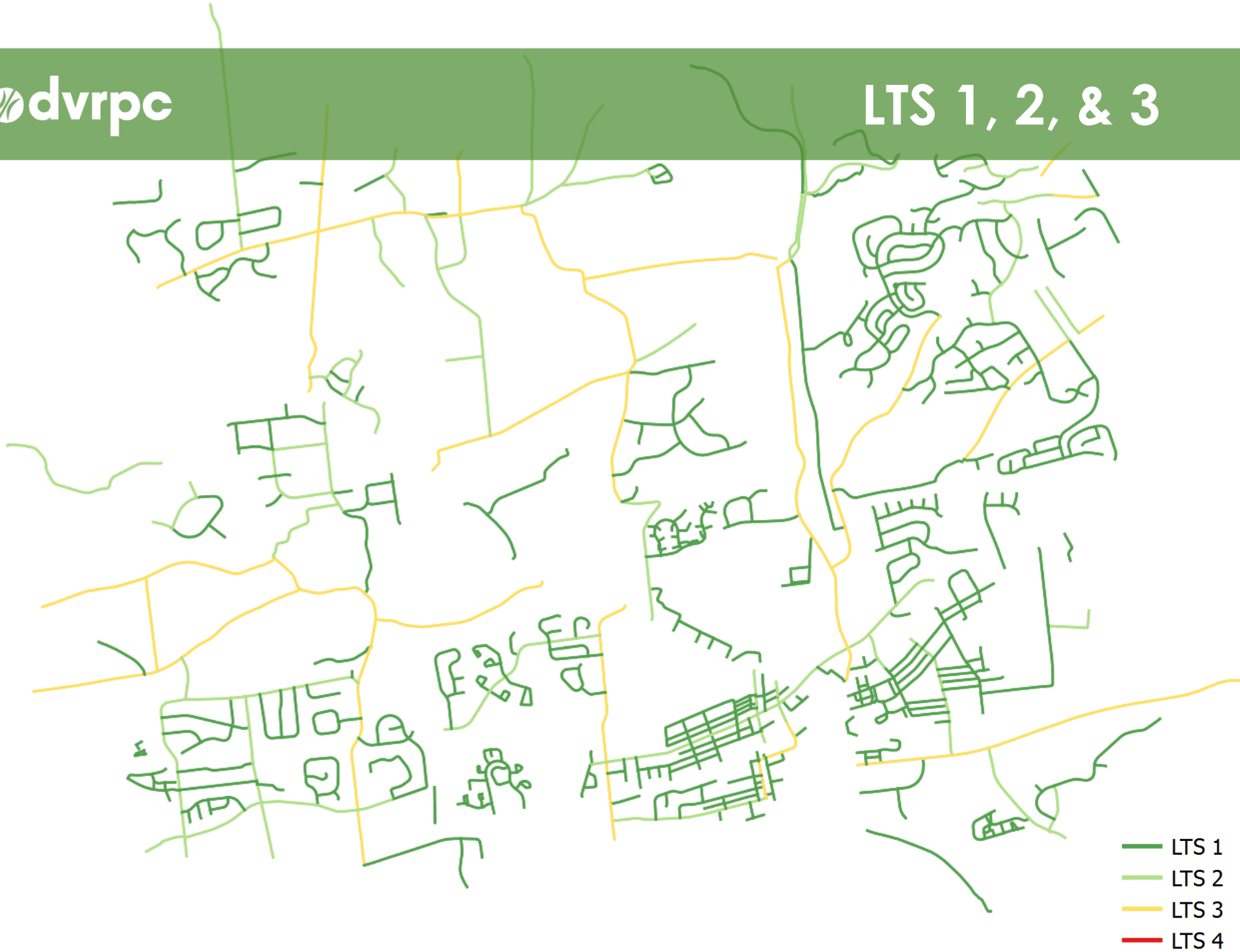
LTS 1, 2, & 3



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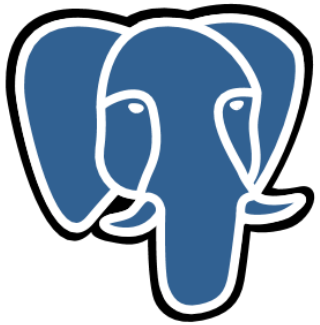
Tools

PTV VISUM

the mind of movement

pgRouting



PostgreSQL

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Link LTS

# Lanes	Speed (MPH)	None	Bike Route	Sharrows	Bike Lane	Buffered Bike Lane	Protected Bike Lane
2 (res)	≤ 25	LTS 1					
2 (res)	30	LTS 2					
2-3	≤ 25						
4-5	≤ 25	LTS 3					
2-3	30						
6+	≤ 25	LTS 4					
4-5	30						
6+	30						
2-3	≥ 35						
4-5	≥ 35						
6+	≥ 35						

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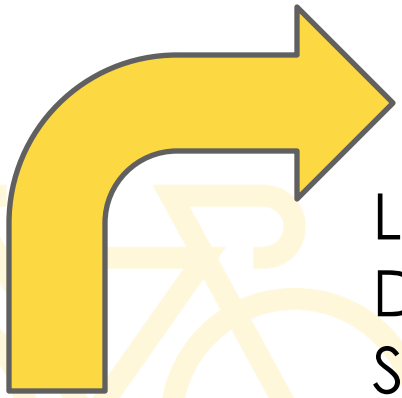
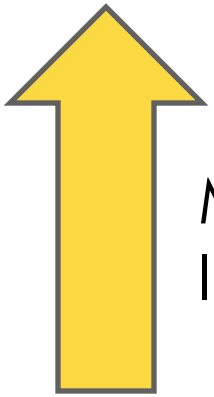
Lowry, M., Furth, P., and Hadden-Loh, T. Low-Stress Neighborhood Bikeability Assessment to Prioritize Bicycle Infrastructure. Presented at the 95th Annual Meeting of The Transportation Research Board, Washington D.C., 2016.

Turn LTS



LTS of Destination Segment



MAX LTS at Intersection

LTS of Destination Segment X 2

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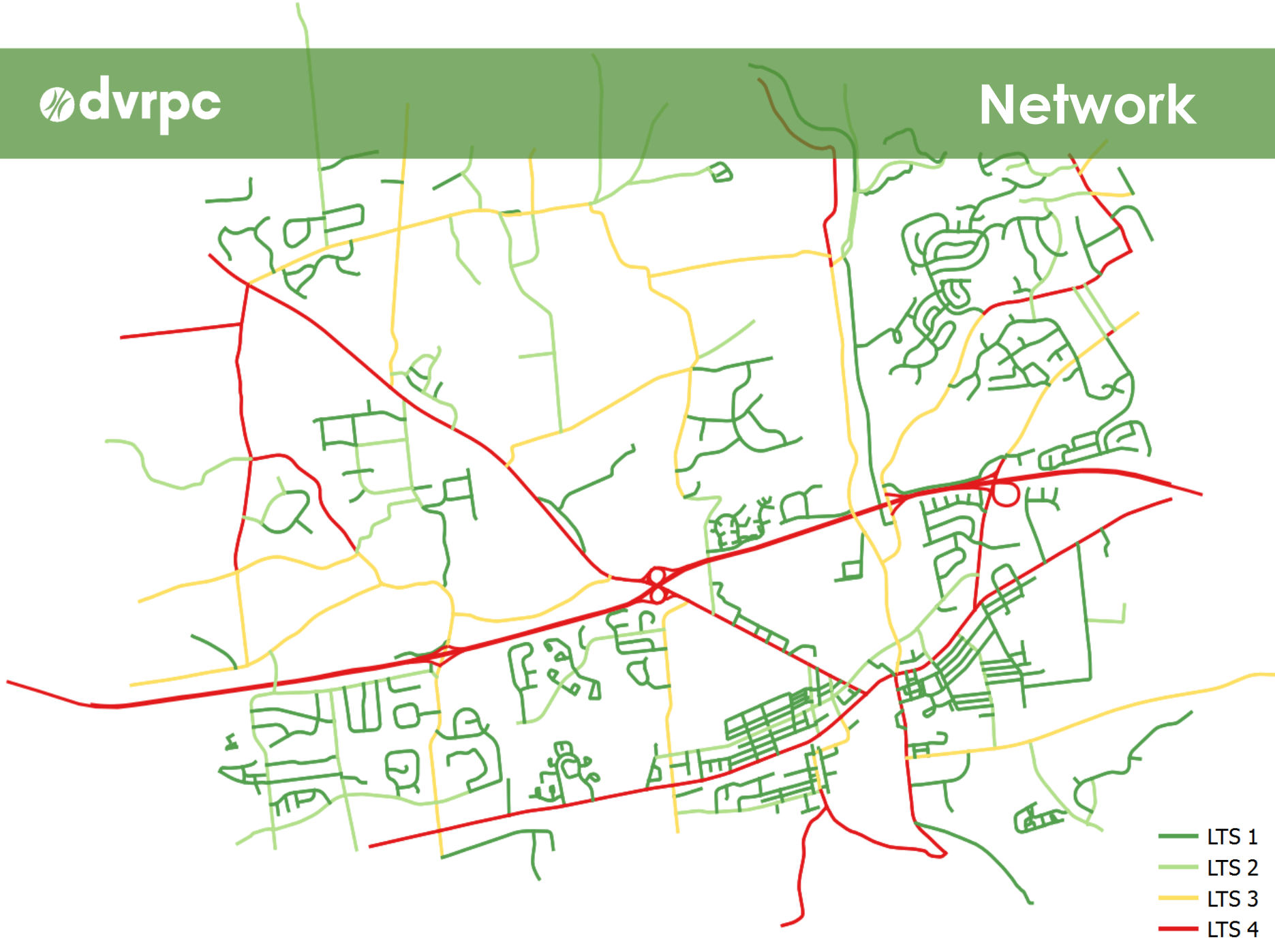
Network



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Shortest Paths

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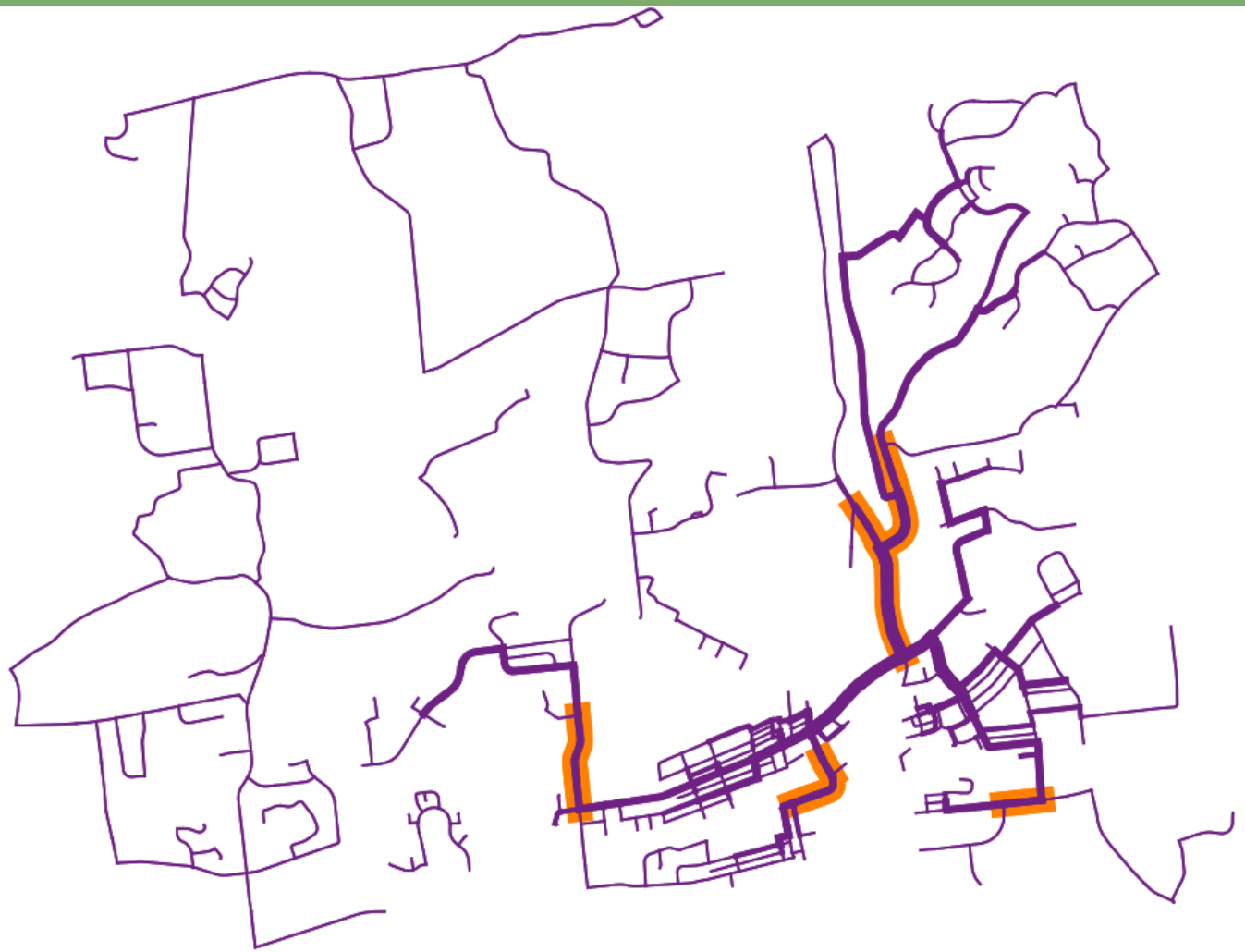
Highest Usage



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Thank You!

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https://www.dvrpc.org/webmaps/BikeStress/