

# M-NCPPC SSP UPDATE

TRANSPORTATION IMPACT STUDY  
TECHNICAL WORKING GROUP (TISTWG)  
MEETING #3

November 4, 2019

FEHR  PEERS | DC

**TOOLE**  
DESIGN

# AGENDA

1. Introductions
2. Project Scope Overview
3. Vision Zero Integration into LATR
4. Alternative Policy Area Tests
5. Discussion and TISTWG Input
6. TISTWG Schedule and Next Steps

# SCOPE OVERVIEW

- LATR Test – local traffic conditions (subdivision review)
  - **Project goal:** Incorporate Vision Zero Action Plan objectives
- Policy Area Test – area-wide traffic impacts (master/sector plan review only)
  - **Project goal:** Better reflect increased travel mode alternatives (as opposed to traditional Level of Service [LOS] metrics)

# TECH COMPONENT A: VISION ZERO INTEGRATION

Task 1: Stakeholder Outreach

Task 2: Literature Review

Task 3: Beta-testing of Alternative Methods in Montgomery County

Task 4: Development of Recommendations

# TECH COMPONENT A: VISION ZERO INTEGRATION

## Task 3: Beta-testing of Alternative Methods in Montgomery County

- Identify two alternative methods

# SYSTEM ADEQUACY – CURRENT DEFINITIONS

Public facilities must be **adequate** to serve proposed development.

- Motor Vehicle System
  - Congestion standards by policy area
    - Delay, critical lane volume, volume-to-capacity ratio
- Pedestrian System
  - ADA compliance
  - LOS D for crosswalk pedestrian delay
- Bicycle System
  - Low levels of traffic stress
- Transit System
  - Peak load LOS D (1.25 transit riders per seat) during the peak period and peak direction

# VISION ZERO PRINCIPLES

Public facilities must be **adequate** to serve proposed development.

- **Vision Zero Action Plan:** *“Going forward, Montgomery County is committed to a safe systems approach to build infrastructure that provides safe passage for all road users.”*

## Vision Zero Principles

- *Transportation-related deaths and severe injuries are preventable and unacceptable.*
- *Human life takes priority over mobility and other objectives of the road system. The road system should be safe for all users, for all modes of transportation, in all communities, and for people of all ages and abilities.*
- *Policies at all levels of government need to align, making safety the highest priority for roadways.*

# SYSTEM ADEQUACY – VISION ZERO DEFINITION

## Subdivision Staging Policy Recommendations

- Define system adequacy in relation to Vision Zero before system adequacy is defined in relation to capacity.
- Acknowledge that as long as there are severe and fatal crashes on roads in the county, the current transportation system is not adequate but we can bring the system closer to adequacy.
- Development projects have the ability to contribute to the adequacy of the transportation system.
  - Specifics will vary between two alternative approaches



# VISION ZERO INTEGRATION INTO LATR PROCESS

Leverage and incorporate ongoing Vision Zero related initiatives in the County

- Bicycle Master Plan – adopted
- Pedestrian Master Plan – ongoing
  
- High Injury Network – completed
- Systemic Safety Analysis: Predictive Safety Performance Functions – ongoing
- Bicycle Level of Traffic Stress – completed
- Pedestrian Level on Comfort – ongoing
  
- Vision Zero Crash Reduction Toolkit – ongoing
- Complete Streets Design Guide – ongoing

# VISION ZERO TOOLKIT

## Crash mitigation strategies to achieve Vision Zero

- Toolkit will include: topic definition, application, street types, safety issues addressed, Crash Modification Factor, design guidance, considerations, estimated costs
- Example treatments:
  - Advance Stop/Yield Markings
  - Curb Extensions
  - Hardened Centerlines / Turn Wedges
  - Median Crossing Islands
  - High-Visibility Crosswalks
  - Leading Bicycle Intervals / Leading Pedestrian Intervals
  - Protected Phases

# ALTERNATIVE 1

## Vision Zero Impact Statement

- To ensure development is executed in a way that the frontage is aligned with Vision Zero principles, each transportation study must include a Vision Zero Impact Statement that describes:
  - Any segment of the high injury network located on the development frontage.
  - Crash analysis for the development frontage.
  - Available and required sight distance for all access points.
  - An analysis of conflict points at all intersections and crosswalks.
  - A speed study including posted, operating, design, and inferred design speeds.
  - A check of the pedestrian and bicycle network attributes and updates to the attributes based on “as built” plans.
  - Any capital or operational modifications required to maximize safe access to the site and surrounding area, particularly from the Vision Zero Toolkit.
  - Others?
- Mitigation recommendations from the capacity-based adequacy determination must align with the Vision Zero Impact Statement and Pedestrian and Bicycle Impact Statement.

# ALTERNATIVE 2

## Replace capacity-based adequacy measurements

- All multi-modal tests are required if the development produces > 50 peak-hour weekday person trips
- Motor Vehicle System
  - Reduce the estimated number of crashes based on predictive safety performance functions
- Pedestrian System
  - ADA compliance
  - Acceptable pedestrian level of comfort
- Bicycle System
  - Low levels of traffic stress
- Transit System
  - Accessible transit stops within 1,000 feet of the site

# BETA-TESTING OF ALTERNATIVE METHODS

Beta-test site discussion

# POLICY AREA TESTS

- Summary of tests from 10/7
- Additional tests
  - Corridor-level
  - Vision Zero
- Threshold setting
- Beta test approach

# POLICY AREA TESTS – KEY CORRIDOR MEASURES

## Person Throughput

- Number of travelers served
- An alternative to vehicle throughput, considers vehicle occupancy and transit ridership
- Vehicle delay could increase without decreasing person throughput (through corresponding increase in transit service and/or ridership)

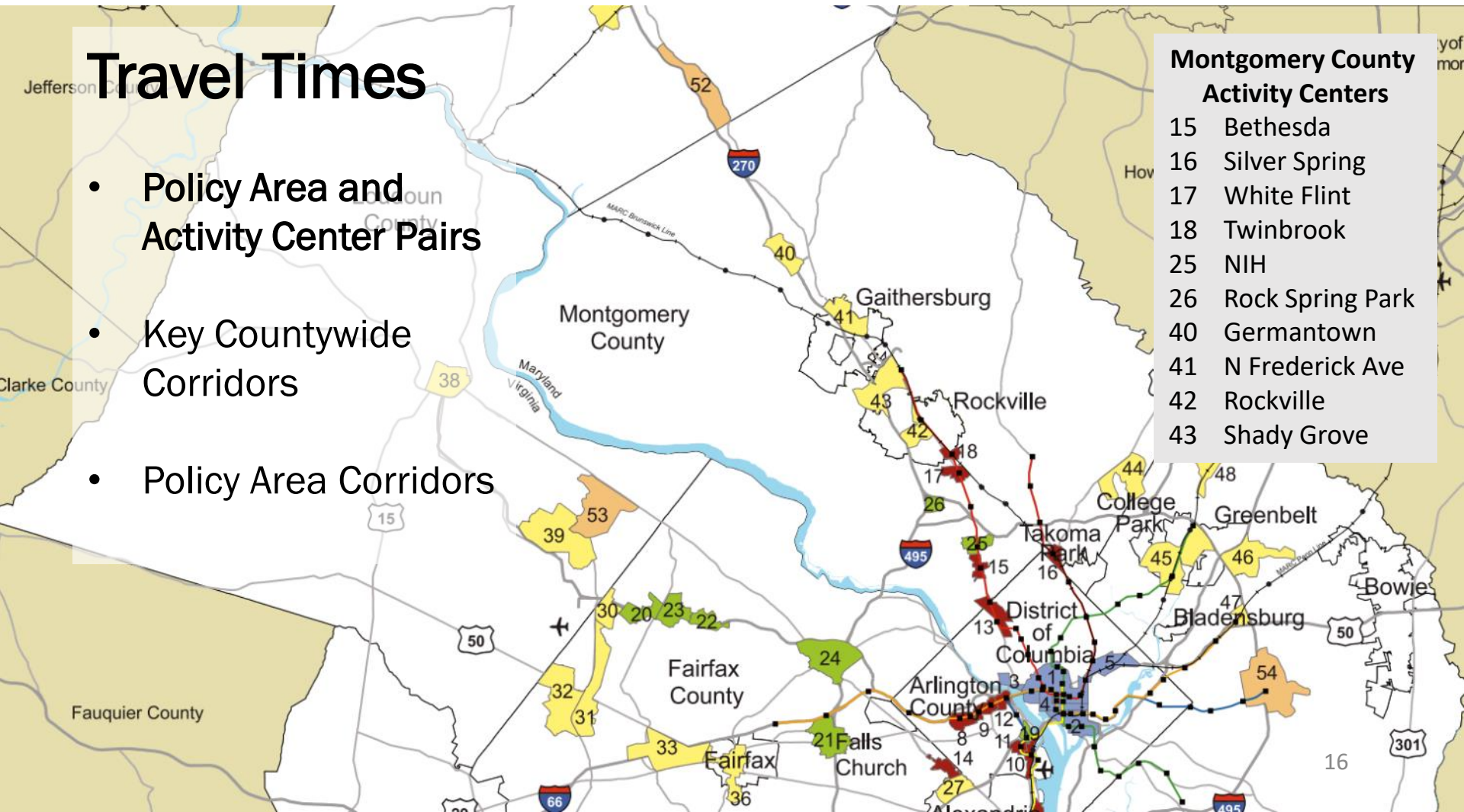
# POLICY AREA TESTS – KEY CORRIDOR MEASURES

## Travel Times

- Policy Area and Activity Center Pairs
- Key Countywide Corridors
- Policy Area Corridors

### Montgomery County Activity Centers

- |    |                  |
|----|------------------|
| 15 | Bethesda         |
| 16 | Silver Spring    |
| 17 | White Flint      |
| 18 | Twinbrook        |
| 25 | NIH              |
| 26 | Rock Spring Park |
| 40 | Germantown       |
| 41 | N Frederick Ave  |
| 42 | Rockville        |
| 43 | Shady Grove      |





# POLICY AREA TESTS – KEY CORRIDOR MEASURES

## Travel Times

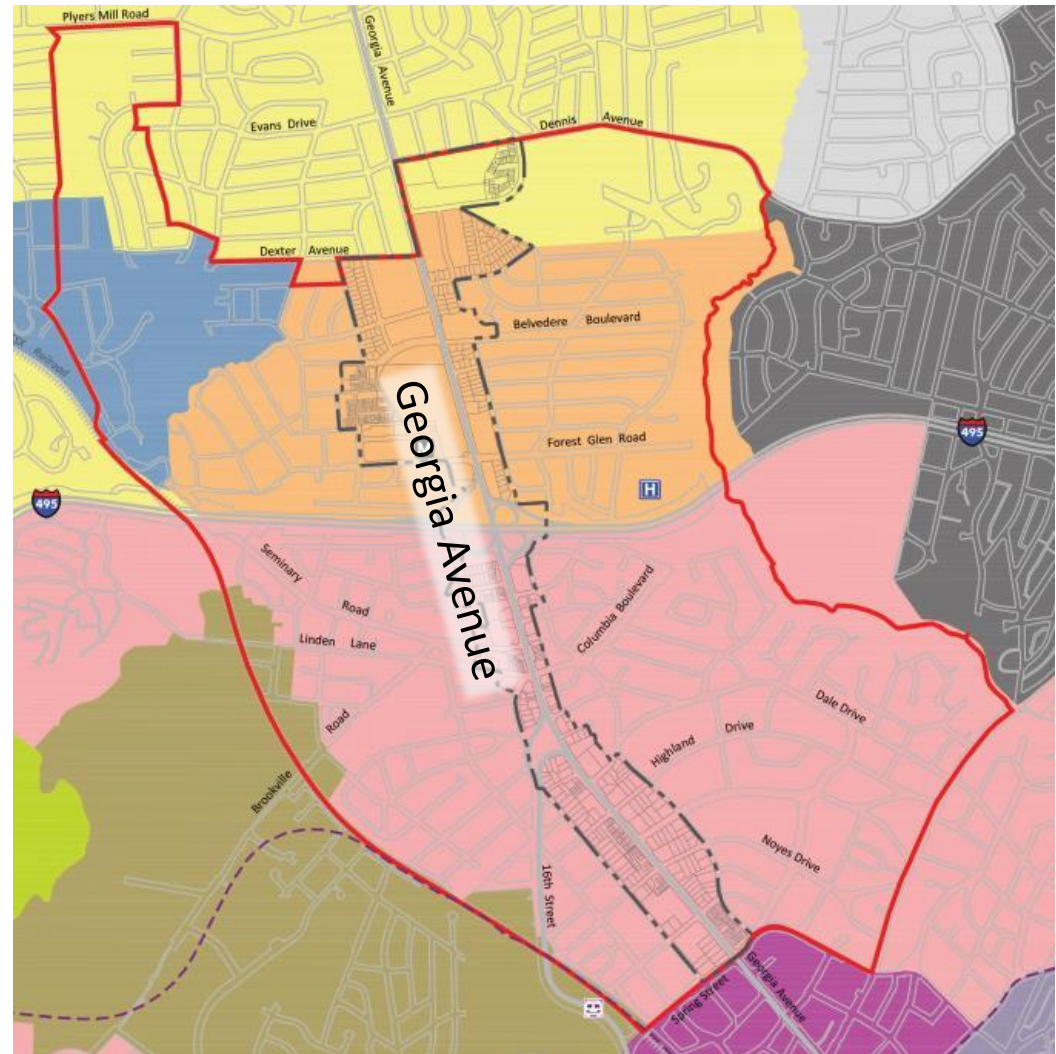
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# POLICY AREA TESTS – KEY CORRIDOR MEASURES

## Travel Times

- Policy Area and Activity Center Pairs
- Key Countywide Corridors
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# POLICY AREA TESTS – KEY CORRIDOR MEASURES

## Accessibility Metrics

### Auto

- Regional Accessibility (peak and off-peak)

### Transit

- Regional Accessibility (peak and off-peak, high-frequency transit and all transit)

### Bicycle and Pedestrian

- Low-stress network connectivity



# POLICY AREA TESTS – VISION ZERO

## Reactive Approach

- Ensure network and service changes made in service of other goals do not (or at least minimally) degrade safety
- Examples:
  - Limit increases to crossing distance or pedestrian signal delay
  - If crash history exceeds countywide average, adjust auto congestion mitigation protocols

## Proactive Approach

- Establish metrics associated with safety
- Examples:
  - A complete network of low-stress bicycle and pedestrian facilities
  - Apply a systemic approach to identifying high risk locations
  - Develop a Vision Zero checklist for understanding design issues

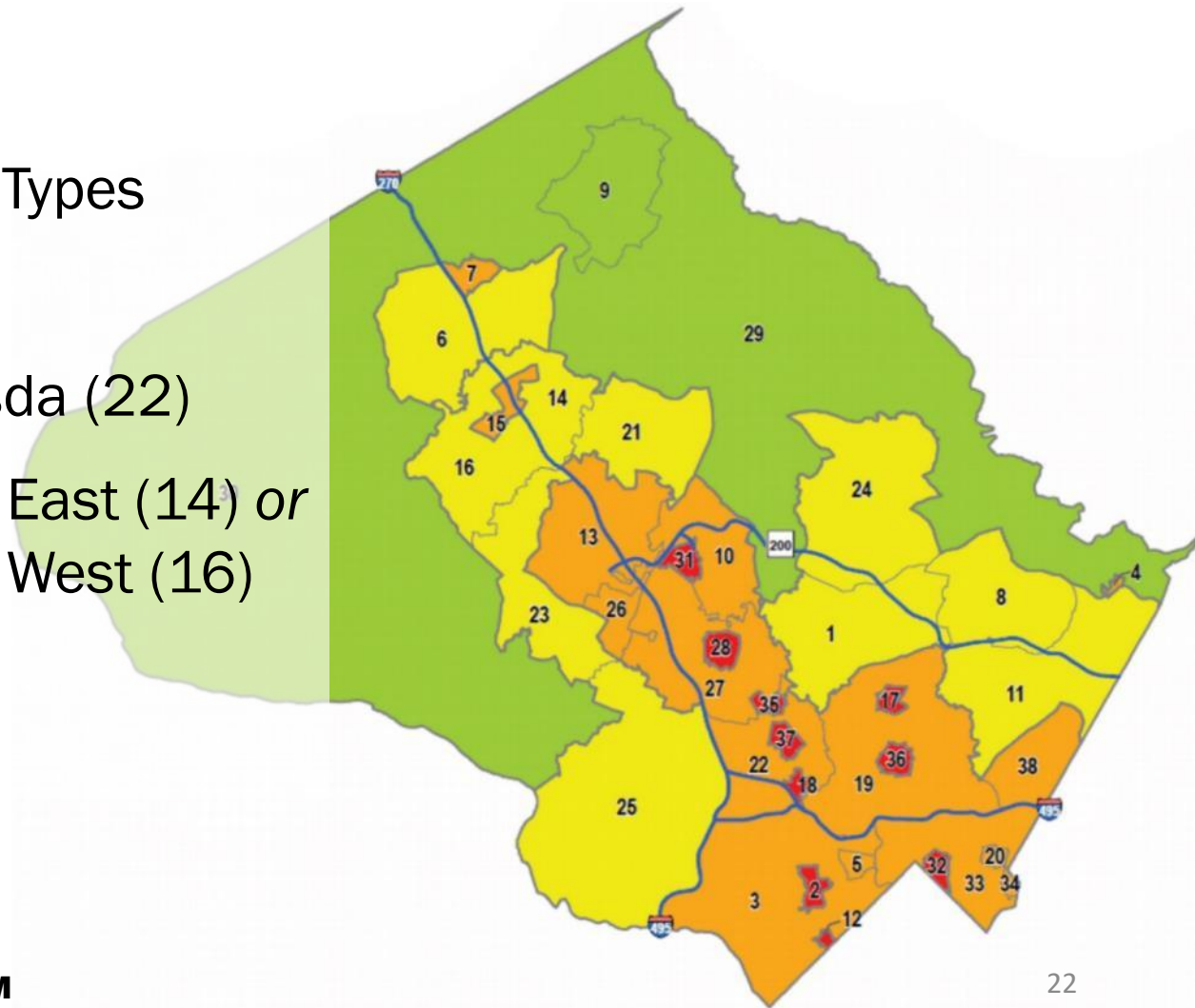
# POLICY AREA TESTS – THRESHOLD SETTING

- Calculate metrics countywide and at the policy area level
- Thresholds as context-sensitive (varies by policy area)
- Approaches:
  - No worse than existing
  - Bring up “lagging” areas
  - Set aspirational goals



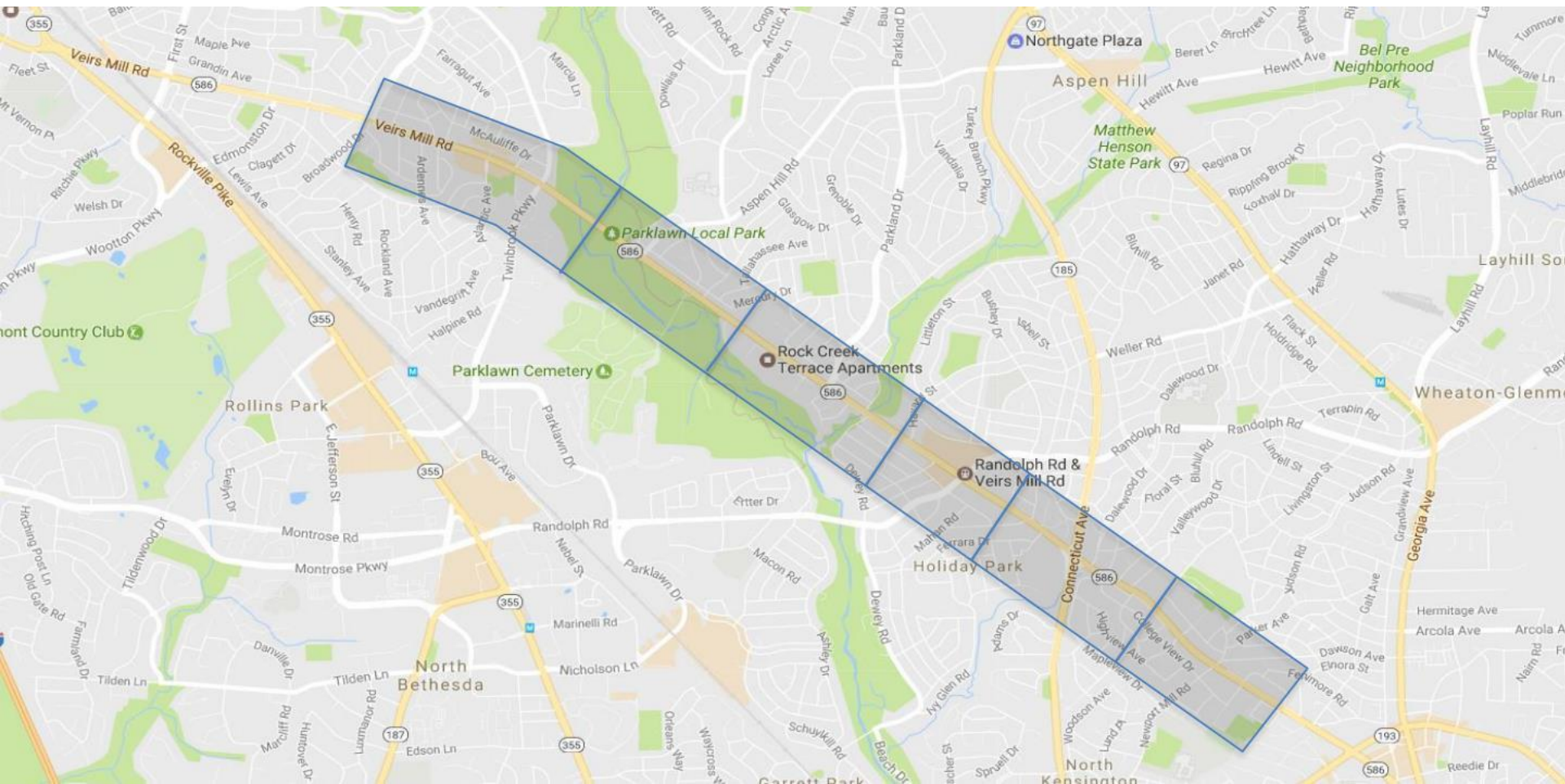
# POLICY AREA TESTS – BETA TEST LOCATIONS

- Diversity of Area Types
  - Bethesda (2)
  - North Bethesda (22)
  - Germantown East (14) or  
Germantown West (16)



# POLICY AREA TESTS – BETA TEST LOCATIONS

- Corridor: Veirs Mill Road



# TISTWG SCHEDULE

Meeting Date  
(Tentative)

Topic

09/09/19

TISTWG Kickoff

10/07/19

Draft LATR Lit Review and Policy Area Test Options

11/04/19

Beta Test Plans for LATR and Policy Area Tests

12/02/19

LATR Data Collection Requirements

01/06/20

Draft LATR Impact Study Reports  
Draft Policy Area Beta Test Results

01/27/20

LATR Draft Final Report  
Policy Area Draft Recommendations (complete in March 2020)