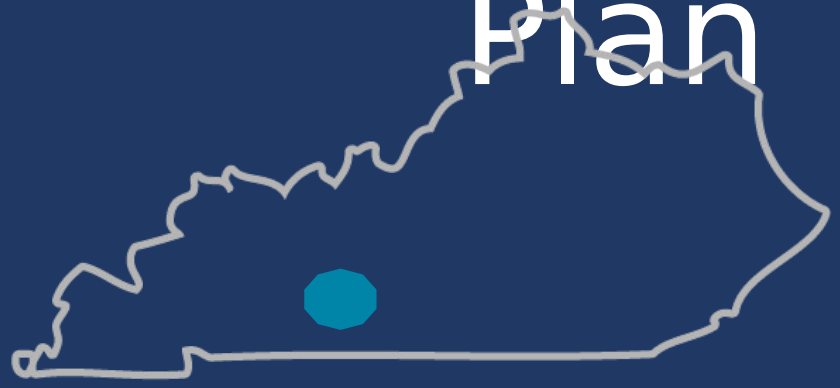
Bowling Green-Warren County MPO's

Multimodal Implementation Plan

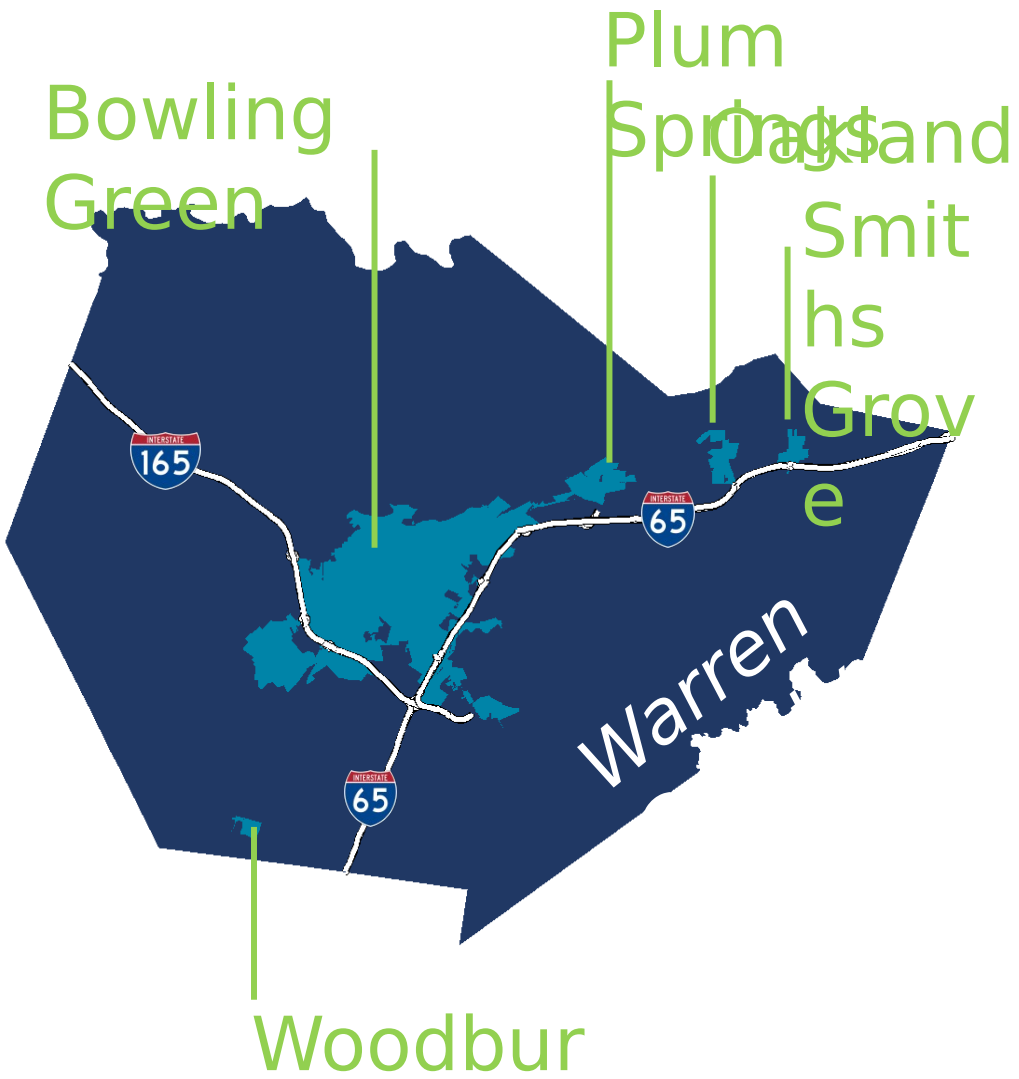


BG & WC
Metropolitan Planning Organization

Multimodal Implementation Plan

- **OUTLINE**
  - → Overview
  - → Planning Process Overview
    - Non-Motorized Latent Demand
    - Level of Traffic Stress
    - Pairwise Comparison
    - Facility Terminology
  - → Lessons Learned & Implementation Successes

Bowling Green-Warren County MPO



Multimodal Implementation Plan

2014

2015

2016

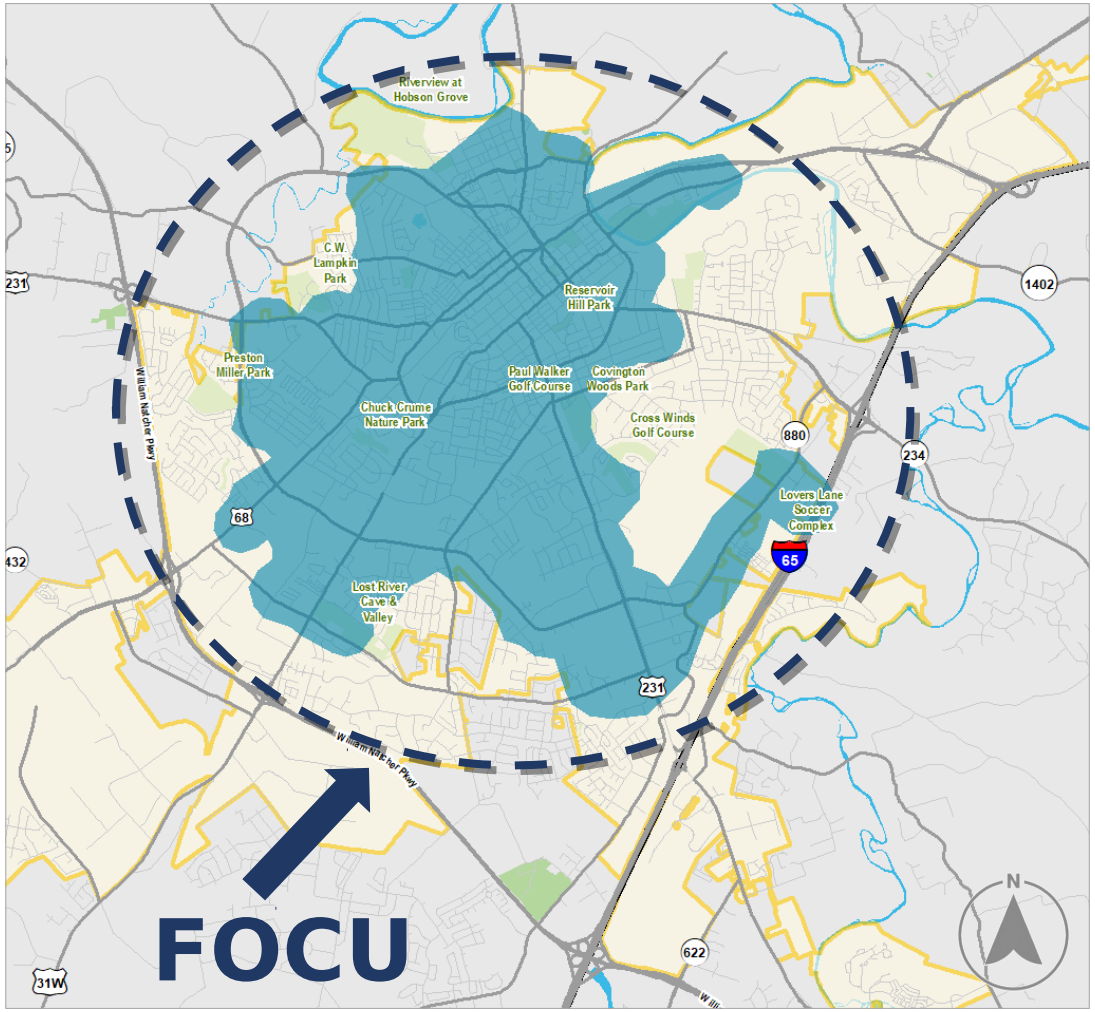
2017

9 Planning Efforts Relating to Multimodal Transportation in 4 Years

Consolidate. Identify. Refine. Prioritize.

Multimodal Implementation Plan

- **EMPHASIS ON CONNECTING:**
  - → To Transit
  - → Existing Bike-Ped Facilities
  - → Parks & Schools



Multimodal Implementation Plan

- **NON-MOTORIZED LATENT DEMAND**
  - → Predicts latent (unrealized) demand for non-motorized infrastructure based on probability to walk/bike
  - → Uses parcel-level population, employment, land use, & proximity data
  - → Aggregated to 1/10 mile grid

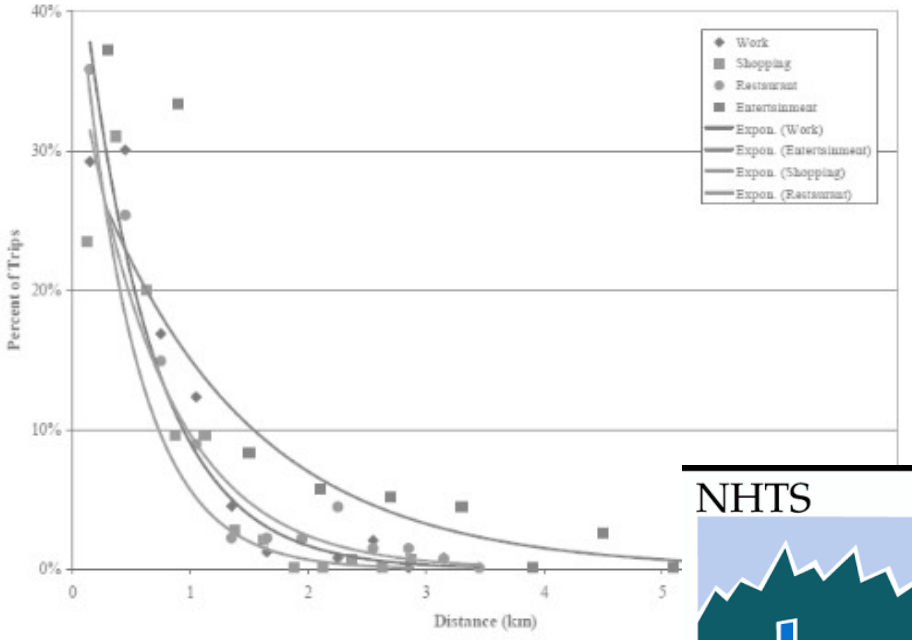
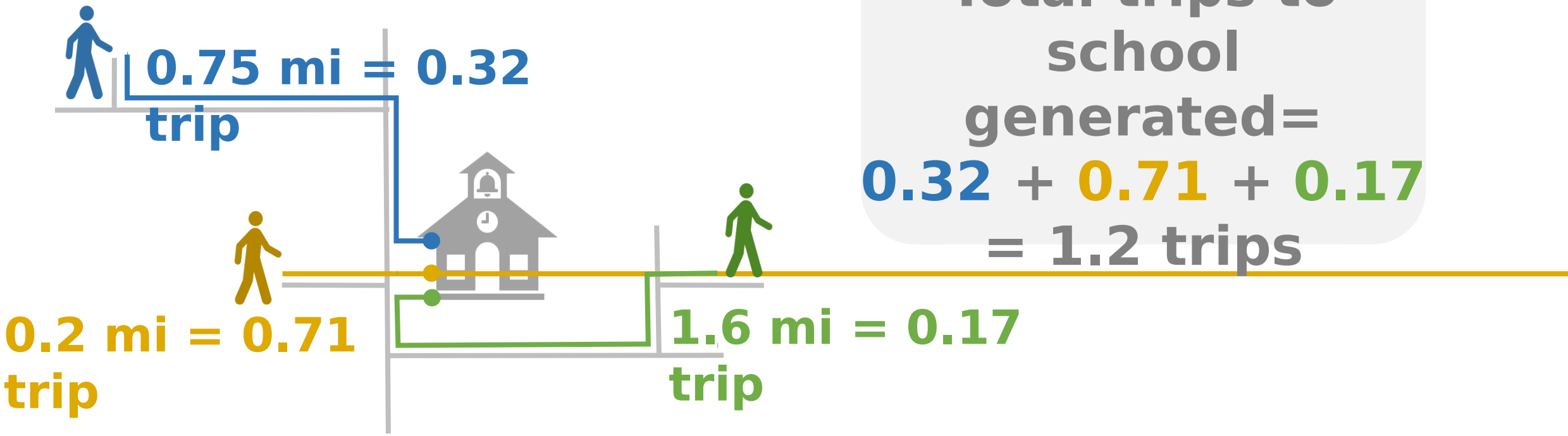


Figure 1. Distance Decay Curves for Walking

NHTS

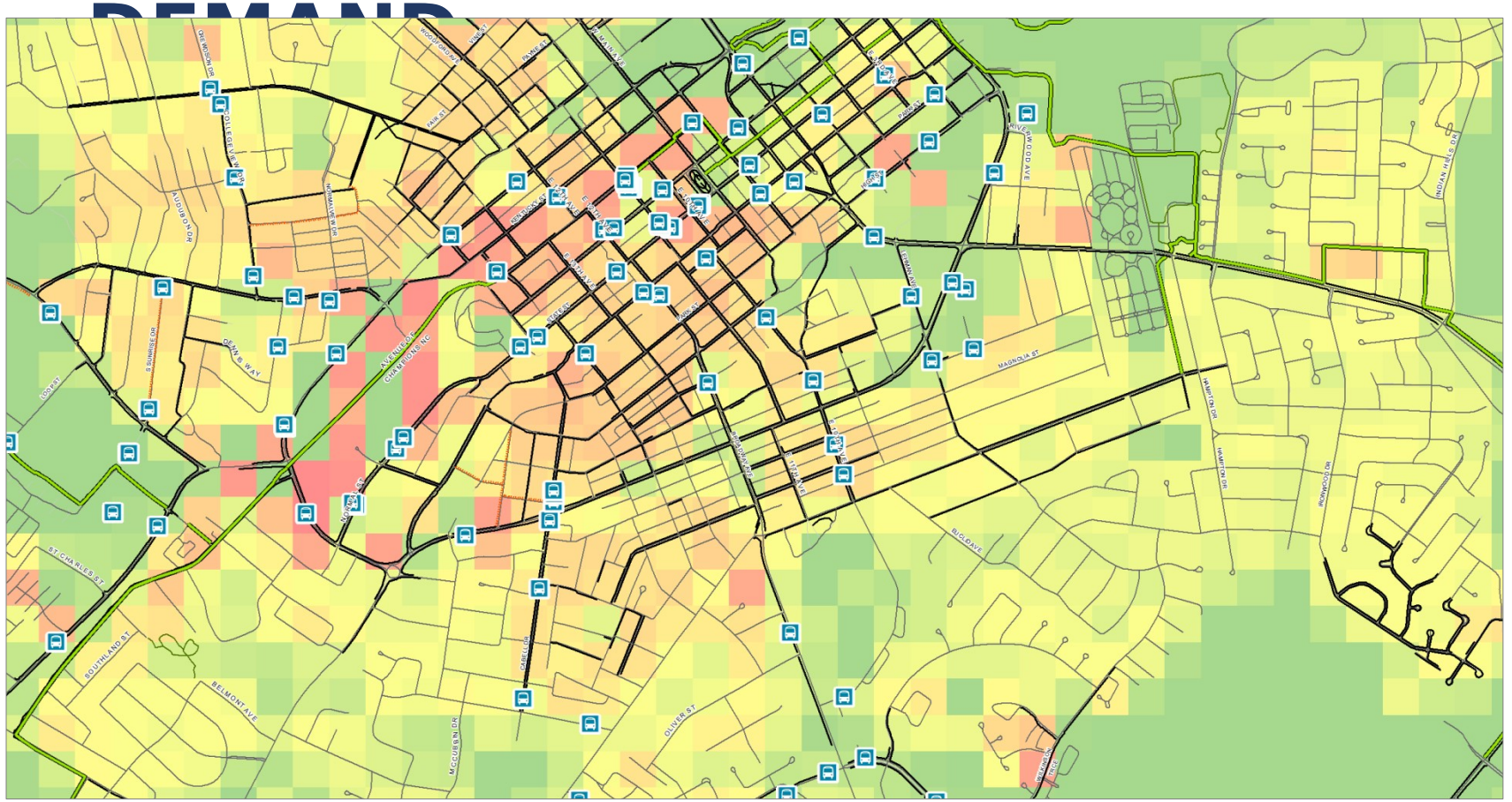
Multimodal Implementation Plan

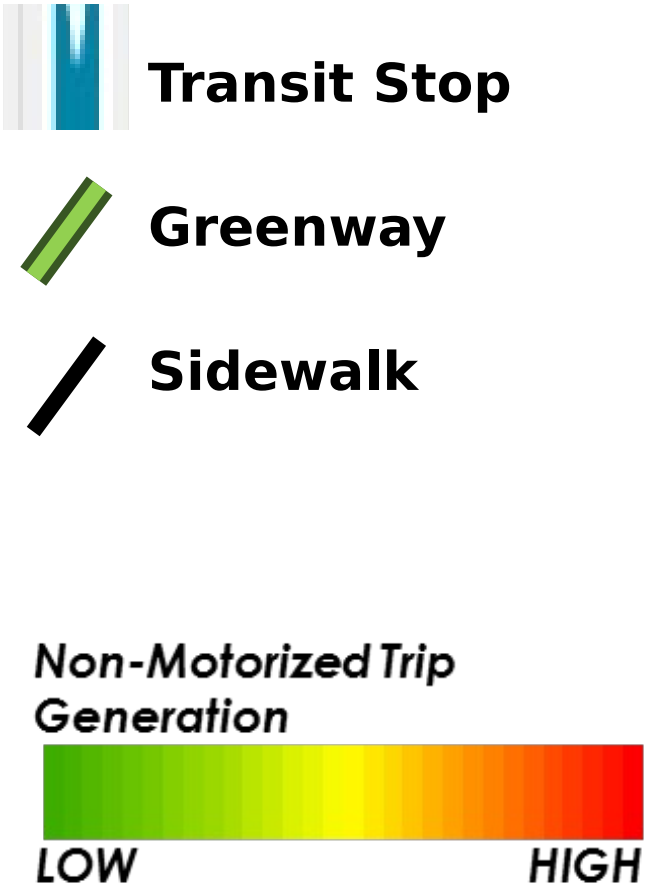
- **NON-MOTORIZED LATENT DEMAND**



Multimodal Implementation Plan

- **NON-MOTORIZED LATENT DEMAND**





Multimodal Implementation Plan

- **LEVEL OF TRAFFIC STRESS (LTS)**
  - → Bicycle network planning methodology-2012
  - → Basic scoring to:
    - understand stress levels of existing & proposed facilities
    - identify clusters of low-stress connectivity
    - identify improvements to overcome stressful barriers

Multimodal Implementation Plan

- **LEVEL OF TRAFFIC STRESS (LTS)**

Bicycle Design User Profiles:

Interested but Concerned	Somewhat Confident	Highly Confident
51%-56%	5%-9%	4%-7%

Low Stress Tolerance

High Stress

Multimodal Implementation Plan

- **LEVEL OF TRAFFIC STRESS (LTS)**

Low Stress ← → *High Stress*

Neighborhood Street

LTS 1

Neighborhood Boulevard

LTS 2

Major Collector

LTS 3

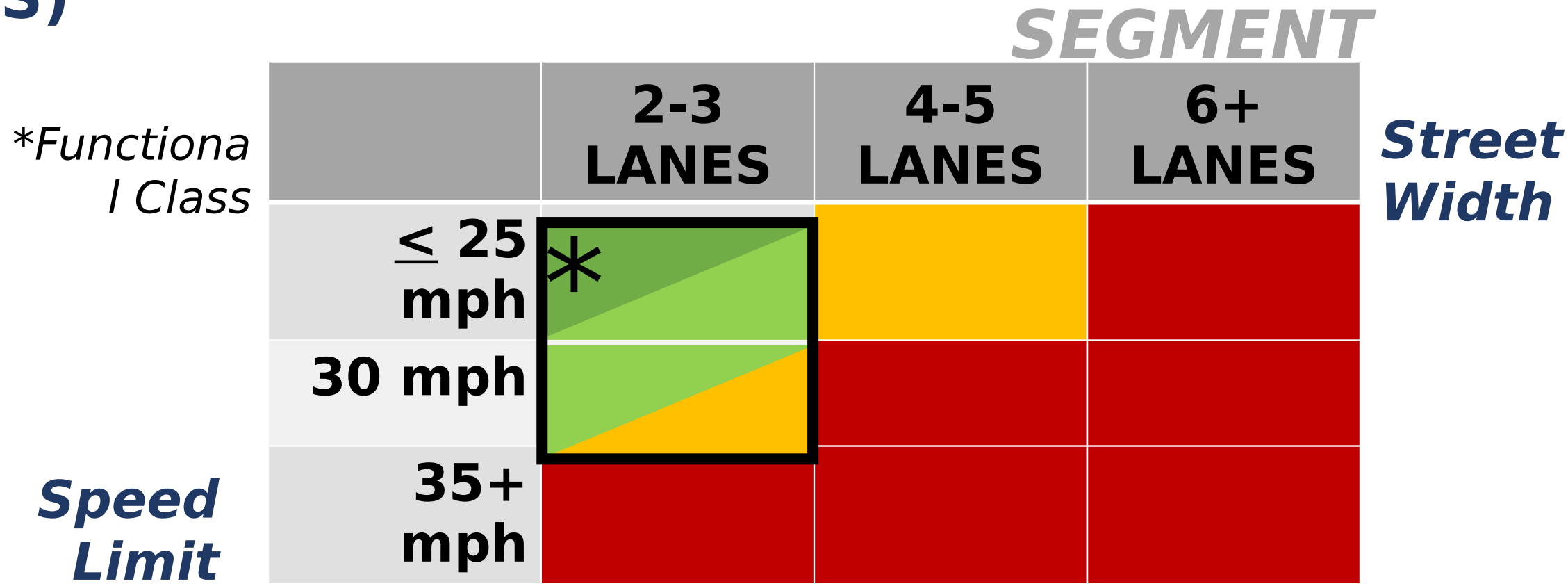
Arterial

LTS 4

Multimodal Implementation Plan

- **LEVEL OF TRAFFIC STRESS (LTS)**

1
2
3
4



Multimodal Implementation Plan

- **LEVEL OF TRAFFIC STRESS (LTS)**

1
2
3
4

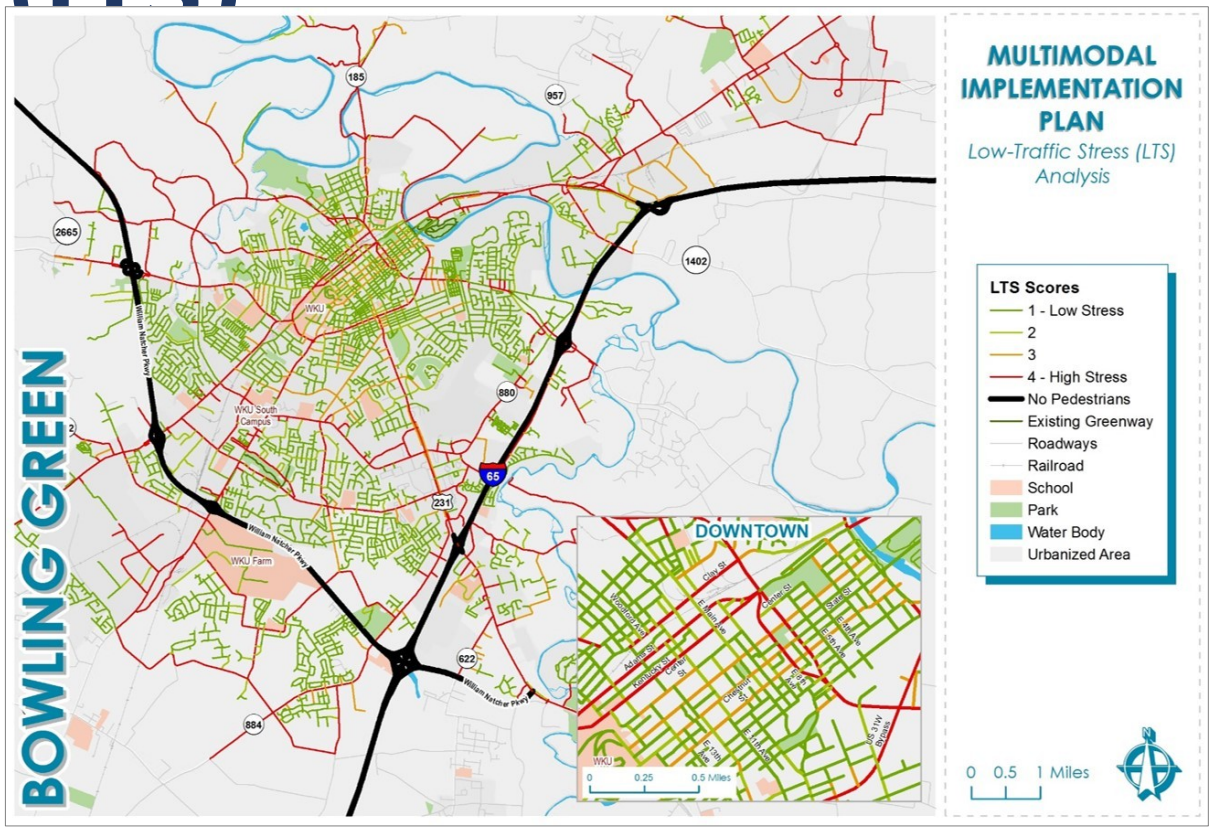
CROSSIN

Speed Limit (Crossing)	≤ 3 LANES	4-5 LANES	6+ LANES
≤ 25 mph			
30 mph			
35 mph			
40+ mph			

Street Width (Crossing)

Multimodal Implementation Plan

- **LEVEL OF TRAFFIC STRESS (LTS)**



LTS 1's & 2's

Multimodal Implementation Plan

- **PUBLIC & STAKEHOLDER ENGAGEMENT**
  - MPO Technical Advisory Committee (TAC)
  - Steering Committee
  - Public

    - Survey
    - Focus Groups
    - Public Meeting
    - Wikimap

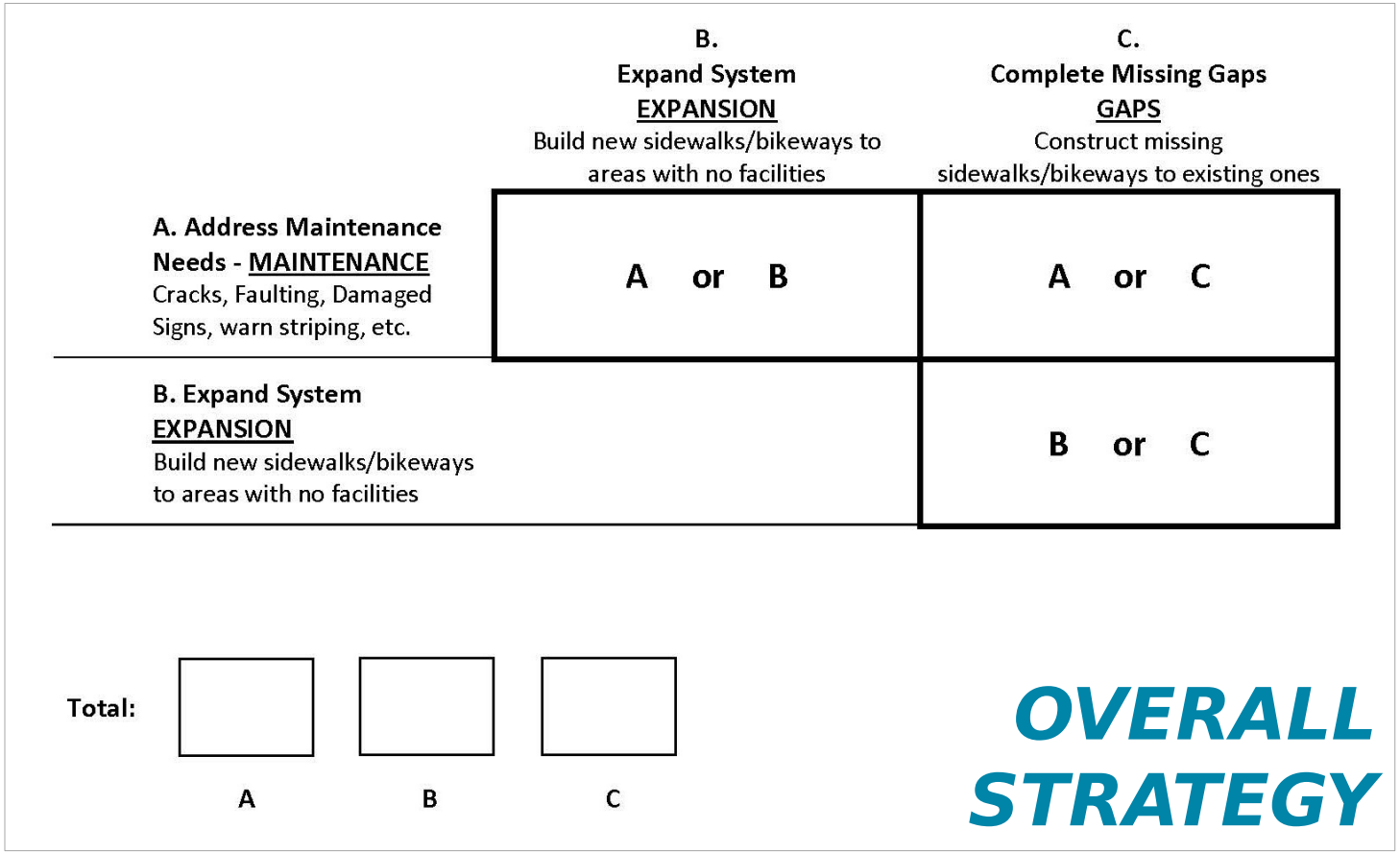
BOWLING GREEN & WARREN COUNTY
Metropolitan Planning Organization

Multimodal Implementation Plan

- **PAIRWISE COMPARISON**

  One-on-One Comparisons

  - Overall Strategy
  - Destinations
  - Facilities
  - Factors that Impact Walking/Biking



Multimodal Implementation Plan

- **PAIRWISE COMPARISON – RESULTS**

OVERALL STRATEGY

Address Gaps

DESTINATIONS

Connect Schools

FACILITIES

Neighborhood Streets

FACTORS

Lack of Buffer

Multimodal Implementation Plan

- **FACILITY TERMINOLOGY**

Multimodal Implementation Plan

- **FACILITY TERMINOLOGY**

GREENWAY

Open Space

URBAN GREENWAY

Roadway ROW

GREEN

Shared Roadway

BIKEWAY FACILITIES

Conventional Bike Lane

Multimodal Implementation Plan

- **LESSONS LEARNED**
  - → Competing interests
    - → Similar mission, different strategies
  - → Collaboration & Communication
  - → Perceived safety vs. access (neighborhood to store)
  - → Need for maintenance plan
  - → Safety & Education Gap

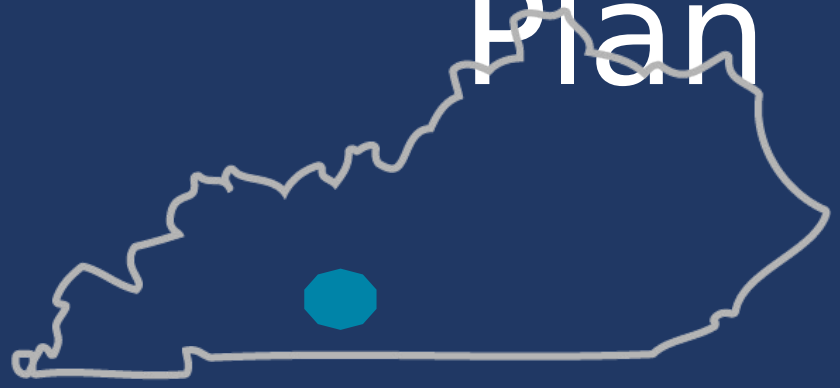
Multimodal Implementation Plan

- **IMPLEMENTATION SUCCESSES**

Multimodal Implementation Plan

- **IMPLEMENTATION SUCCESSES**
  - → Direction for future bicycle and pedestrian projects
  - → Formation of BikeWalkBG
    - → Promotes biking and walking
    - → Safety Initiative
  - → City's Sidewalk Prioritization Process Revampe
    - → Use of Latent Demand Generation
  - → Momentum for bicycle and pedestrian focus
    - → Road projects & priorities
  - → Community Involvement

Bowling Green-Warren County MPO's Multimodal Implementation Plan



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