Bicycle Infrastructure Improvements and Bike Share Feasibility Study

Overview and Scope
Why We Are Studying This

- 2045 LRTP requirements
- Smart Scale requirements
- Regional funding for bike/ped
  - 5307
  - Transportation Alternatives Program (TAP)
  - CMAQ
- First/last mile solution to transit
- Health & wellness
- Reduce congestion and improve mobility

FY15 Nationwide Transportation Funding: $51 Billion
- Bike/ped ~3%
- Transit ~20%
- Highway ~77%
Background

• Approved FY 2017 UPWP
• Approved RSTP funding
• GWRC Transit/TDM Study
• Scoping meeting

  – City staff, Fredericksburg Regional Transit & GWRideConnect
  • Highest bike use in September (629) and August (603)
Study Overview

Two phases

• Bicycle infrastructure improvements
  – in-house work for LRTP to expand to GWRC Region
• Bike share feasibility
Study Area

Area to receive in-house work from LRTP effort to expand to GWRC Region
Study Tasks – Bicycle Infrastructure Improvements

1. Existing Conditions
   - Existing infrastructure, plans, crash data, demographic data, land use, etc.

2. Gap Analysis
   - Bicycle propensity and level of stress analyses
   - List of network gaps

3. Infrastructure Recommendations
   - Prioritized with costs

4. Constrained Plan/Final Report

Harrisonburg, VA Level of Stress Map
What Is Bike Share?

• A service in which bicycles are made available for shared use on a short-term basis
  – Subscription – 30-45 minutes free
  – Bike serves multiple users per day
  – Run by government agencies or a public-private partnership
  – Affordable access to bicycles for short-distance trips (can help transit with first/last mile issues)
Evolution of Bike Share

- White bikes (Amsterdam, 1967)
- Coin-operated (1990s)
- Information technology based
  - Smart dock
  - Smart bike
Study Tasks – Bike Share Feasibility

1. Background Research
   – Goals and objectives
   – Survey of peer bike share programs

2. Market and Feasibility Analysis
   – Constraints and opportunities
   – Propensity map (land use, population and employment density, infrastructure and commute patterns)
3. System Plan
   - Three expansion alternatives
   - General station locations and size

4. Business and Financial Plan
   - Funding source, recommended ownership mode, operating model, technology, potential sponsors
   - Financial and ridership projections (short- and long-term capital and operating costs)
Study Tasks – Bike Share (cont.)

5. Implementation Plan/Final Report
   – Phasing and program development
   – Vendor contracting and procurement
   – Marketing strategy
   – Equity strategies

UBike – University of Virginia
Schedule

• Start date – January
• Stakeholder group – 3 meetings (two workshops and final presentation)
• Final presentation to FAMPO – July 2017
Cost of Study

• Total labor costs: $46,919.70
  – 494 hours (492 for Foursquare, 2 for Michael Baker)

• Additional direct expenses: $2,380
  – Travel to/from Fredericksburg

• Total cost: $49,299.70
VA Jurisdictions With Bike Share

- Capital Bikeshare
  - Arlington & Alexandria
  - Reston & Tysons (Oct.)
- Richmond (2017)
- Norfolk (study)
- Roanoke (study)

- University of Virginia
- James Madison University
- George Mason University
Questions?