Tysons Corner Circulator Study
Preliminary Results Summary

April 24, 2012

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Tysons

Tysons Corner Circulator Study: Preliminary Results Summary

April 24, 2012

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Study Purpose

- LONG RANGE Planning study to support Tysons Corner redevelopment and rezoning process
  - Design circulator system to support goal of maximizing transit trips/minimizing auto trips
- Identify needed transit preferential treatments
  - Support a reliable and effective circulator system
  - Identify required expansion of right of way – may require additional adjacent land

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Planning Process

- Peer analysis of circulator systems in other cities
- Project goals and objectives
- Network development process
- Long range ridership forecasts
- Transit preferential treatments
- Mode options
- Operating and capital costs
- Finalize recommendations

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Network Development Process

- Five preliminary networks developed initially
  - Long range design based on 2050 forecasted conditions
  - Individual routes developed – combined into networks

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Network Development Process (cont.)

- Evaluation of Five Preliminary Networks
  - Evaluation Framework
    - Total trips beginning/ending in Tysons Corner within ¼ mile of each network
    - Percent of trips beginning/ending in Tysons Corner within ¼ mile of each network
    - Total trips beginning/ending in Tysons Corner per mile of circulator network
  - Network #1 and Network #2 selected for more detailed evaluation

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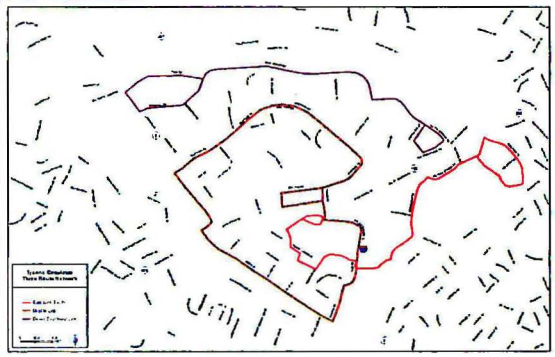
Network #1: Three Route Network



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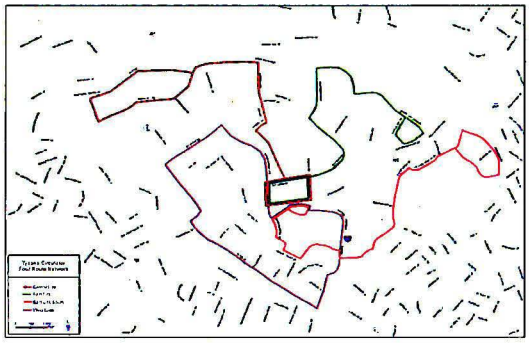
Network #2: Four Route Network



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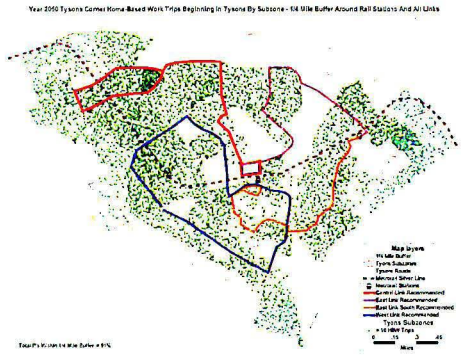
Trips Beginning in Tysons Corner- Network #1



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Ridership Forecasts

- Utilize regional forecasting model – reflect 2050 conditions
- Four key variables impact ridership
  - Service frequency
  - Circulator fare
  - Parking cost
  - Travel time (speeds)

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Ridership Forecasts

- Two ridership scenarios

	Scenario #1	Scenario #2
Frequency	6 minutes peak, 10 minutes off-peak	4 minutes peak, 6 minutes off-peak
Fare	$1.00	No fare
Parking Costs	Higher than Tysons currently – reflects costs in Wilson Boulevard Corridor	Higher than Tysons currently – reflects costs in Wilson Boulevard Corridor
Travel Speeds	Based on Lower Level of Dedicated Transit Lanes	Based on Higher Level of Dedicated Transit Lanes

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Ridership Forecasts

- Scenario #1

Network	Total Ridership	Transfer from Metrorail	Non-Metrorail Riders
Network #1	17,575	6,195	11,380
Network #2	16,643	7,355	9,108

- Scenario #2

Network	Total Ridership	Transfer from Metrorail	Non-Metrorail Riders
Network #1	33,746	12,323	19,423
Network #2	33,310	14,362	18,948

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Detailed Network Evaluation

- Evaluation criteria
  - Daily ridership
  - Boardings per revenue hour
  - Operating cost per rider
  - Capital cost per rider
  - Circulator travel time between select origins/destinations
  - Change in transit mode share
  - Run time variability – congestion

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Transit Preferential Treatments

- Types
  - Dedicated transit lanes
  - Queue jumps
  - Transit signal priority
- Factors considered
  - Level of congestion (speed)
  - Queue length at intersections
  - Transit vehicle volumes
  - Person carrying capacity

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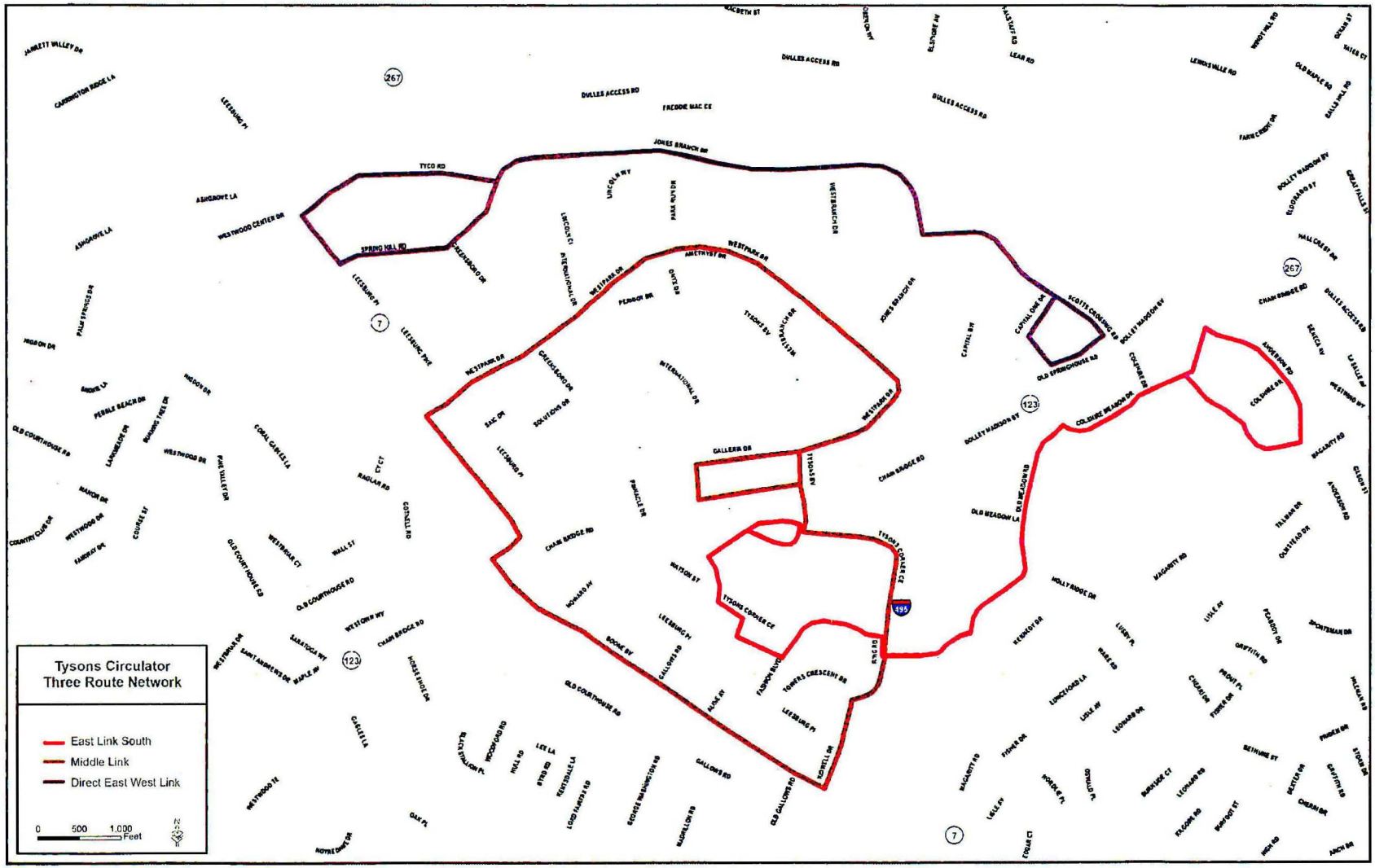
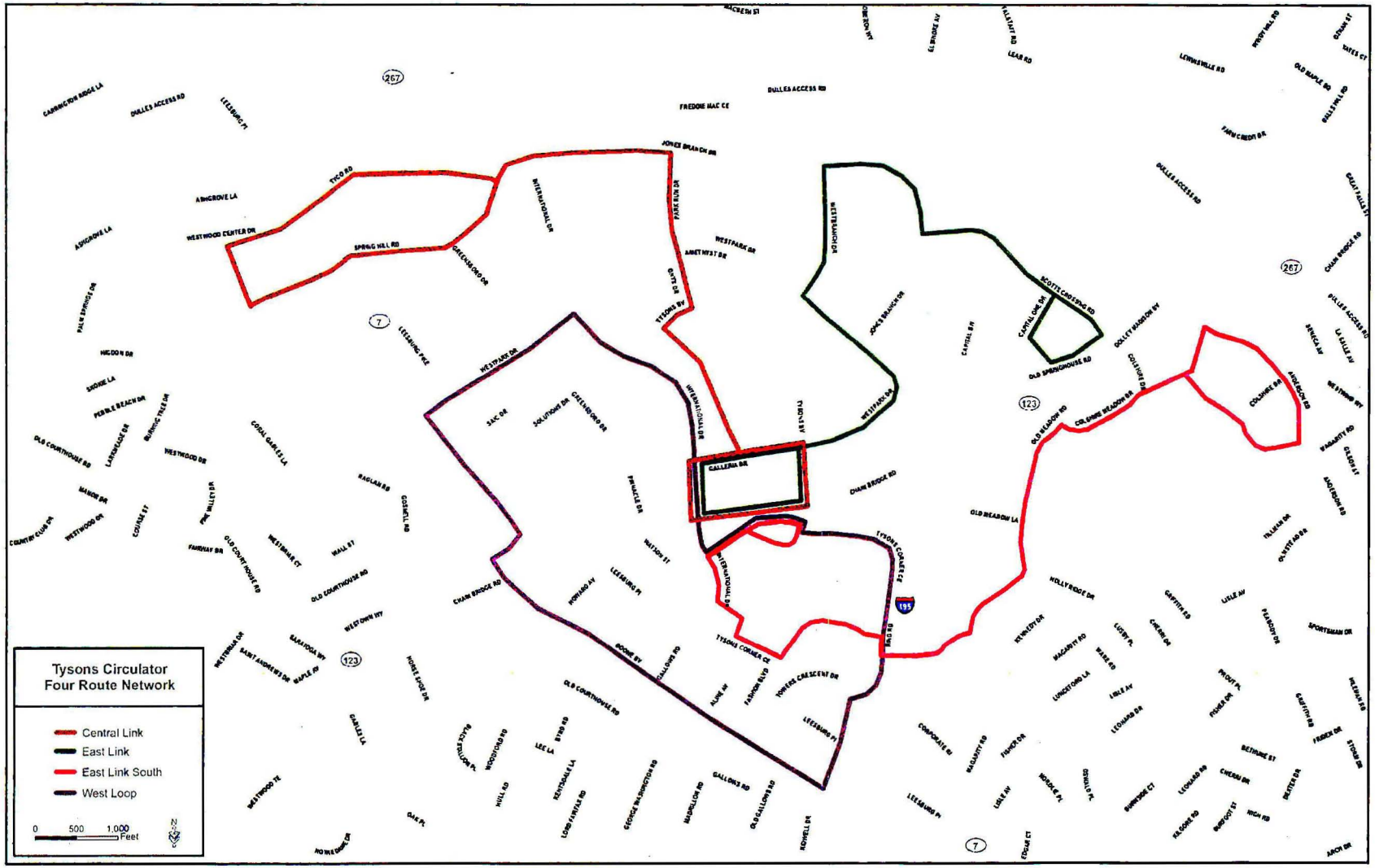
Next Steps

- Select final network
- Finalize transit preferential treatment recommendations
- Recommend modes
- Calculate costs
- Refine ridership forecasts – final network
- Complete final report in Spring 2012

Network #1: Three Route Network



Network #2: Four Route Network



The project route design process utilized two key sources as a foundation. These key sources are the Planning Objectives Utilized in Route Design and a set of Route Design Principles as outlined below.

Planning Objectives Utilized in Route Design

- Provide efficient, reliable, and high frequency service that is competitive with automobile travel
- Attract new transit riders and increase use of transit for commuters
- Provide convenient access to a variety of high trip generating destinations – provide service to both commuters and internal trips
- Provide coverage to serve the most important destinations in Tysons Corner, while maintaining service efficiency and directness of travel
- Provide simple, convenient, and coordinated connections with Metrorail, HOT lanes, BRT/Express bus service, and local bus service

Route Design Principles:

- Keep the system as easy to understand as possible
    - Maintain consistent routing at all times throughout the day
    - Minimize the total number of routes in the Circulator system
- Find optimal balance between route directness and coverage
- Minimize duplication of Circulator route mileage
- Minimize use of busiest through roadways
- Rely on Avenues and Collectors
- Utilize both existing and future roadways

Please Provide Us Your Comments

We are very interested in your feedback on the Circulator Study work completed to date. Please provide us any comments below on what you heard tonight. Thank you.