

February 6, 2003

**MEMORANDUM**

TO: Montgomery County Planning Board

VIA: Richard C. Hawthorne, Chief Transportation Planning *RC Hawthorne*

FROM: Daniel K. Hardy for the Park and Planning Department (301-495-4530) *DKH*  
Transportation Planning

SUBJECT: Silver Spring Pedestrian Study – Informational Briefing by Department of  
Public Works and Transportation

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**Recommendation: Receive briefing from DPWT staff**

As part of the Silver Spring Redevelopment Program, the Department of Public Works and Transportation (DPWT) is studying alternatives to improve pedestrian safety and mobility within the Silver Spring CBD. **DPWT staff will present their study status and preliminary findings to the Planning Board on February 13.**

The study's build alternatives (Alternatives 2 through 4) range from implementing pedestrian facility enhancements to establishing one-way traffic patterns on certain CBD streets. Alternatives that would convert CBD streets to one-way operation have generated substantial public interest. Exhibit 1 summarizes the locations where one-way operation is being studied in Alternatives 3 and 4.

To date, information necessary to fully evaluate the study alternatives has not been prepared. As indicated in Attachment A, we have requested this information and DPWT staff has indicated that complete study documentation will likely be available within a few weeks. **After our review of the forthcoming DPWT report, staff will bring recommendations to the Planning Board.**

DPWT and their consultants presented the study to the public at a December 12, 2002 workshop at Saint Michael's Church. The handout from that workshop is included as Attachment B.

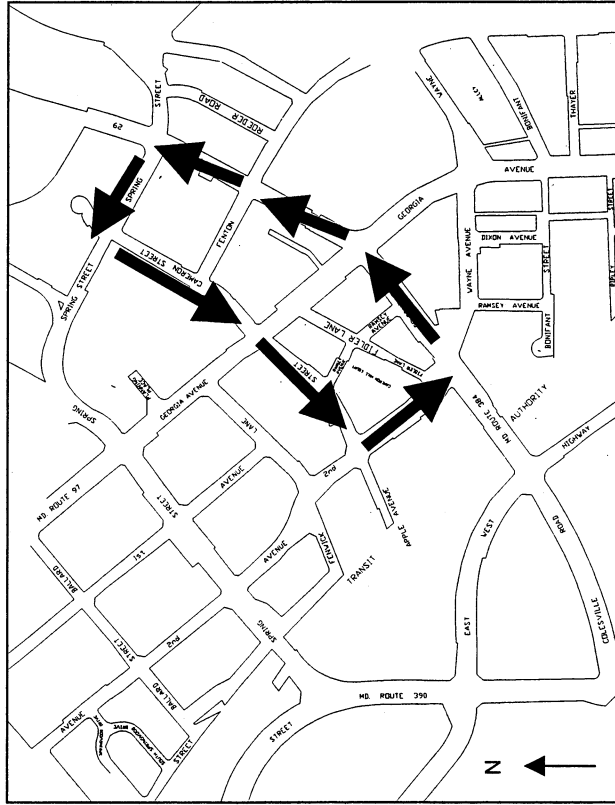
DKH:kcw  
Attachments

cc: Tom Migrock  
Glenn Kreger  
Gary Stith

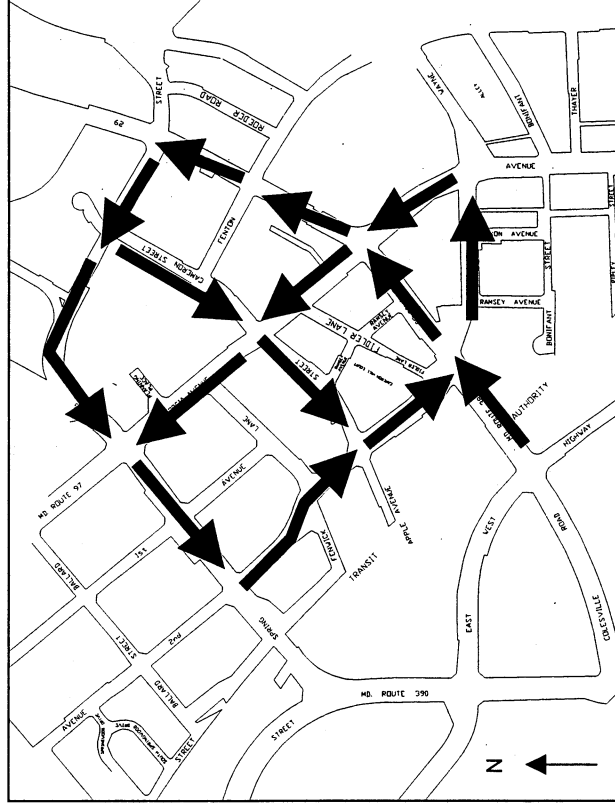
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# Exhibit 1.

## One-Way Street Concepts in DPWT Study Alternatives



Alternative 3



Alternative 4



THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

Attachment A

January 9, 2003

Mr. Emil Wolanin, PTOE  
Chief, Traffic and Parking Division  
Transportation Systems Management  
Department of Public Works and Transportation  
EOB, 11<sup>th</sup> Floor  
Rockville, MD 20850

Dear Mr. Wolanin: *Emil*

We have been working as part of the technical team evaluating the proposed one-way street system changes in the Silver Spring CBD. The public meetings recently were valuable in informing the public about the changes being considered. However, we are concerned that at this time we do not have a report that documents many of the operational and planning aspects of the proposal that have been raised by team members. Until we get this information it is not possible for us to develop a staff position and take this to the Planning Board for their review and recommendations to you.

In discussions with your staff and your consultants, BMI, we have asked for more information on topics such as:

- the changes in traffic assignment and resulting level of service at study area intersections
- the estimated capital costs of the alternatives
- the ability of the traffic control system and roadway configurations to operationally accommodate the high volumes of traffic that will be required to turn for the new traffic streams on Colesville Road, and Spring and Cameron Streets.
- How speeds will be controlled. Recent discussions in Planning Magazine (May and December 2002) have noted that one-way systems can increase speeds and change land access and are best done in concert with appropriate design of adjacent development.

- How on-street parking on both sides of Colesville Road will not result in increased mid-block crossings of pedestrians, as drivers leave their cars and follow the natural path to destinations on the opposite side.

I encourage you to ensure that a report dealing with the issues above in the context of the proposals is prepared soon. The materials prepared thus far have tended to be extremely positive of the one-way proposal, and have not recognized that one-way systems can create many problems, which must be balanced against the potential benefits.

I look forward to hearing from you in the near future with additional information on this interesting proposal so we can keep it moving toward decision-making in our public process.

Feel free to call me, or Dan Hardy on my staff if you wish to discuss any aspects of my request. We are available at 301-495-4525.

Sincerely:

A handwritten signature in black ink that reads "Rick Hawthorne". The signature is written in a cursive style with a long horizontal flourish at the end.

Richard C. Hawthorne, PE  
Chief, Transportation Planning

RCH:cmd

Letter to Wolanin.doc

**Silver Spring Pedestrian Study**  
**Public Workshop December 12, 2002**  
**Project Summary**

## Background

This study's purpose is to make downtown Silver Spring a more inviting, pedestrian friendly area by improving overall pedestrian and bicycle safety, without unduly impeding vehicle and transit mobility. It has been the general feeling that pedestrian safety in downtown has to be improved, but the opening of several large developments in the near future makes the matter more urgent. This study includes an extensive data collection effort, aimed at pinpointing and quantifying the specific problems encountered in the CBD. The study further evaluates pedestrian safety measures to solve identified problems, while maintaining vehicular traffic flow.

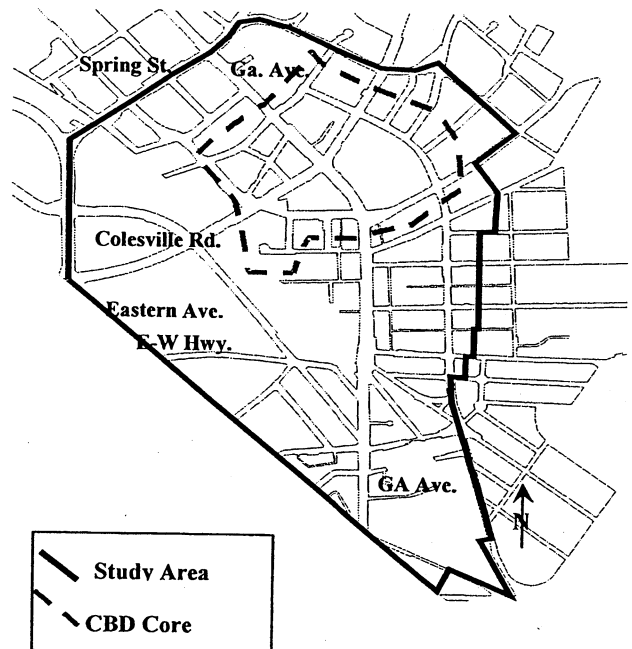
## Need

Downtown Silver Spring is traversed by two major arterial roads, serving commuters to Washington DC and other employment centers (e.g., Bethesda). On the other hand, the downtown itself is an attraction center, including offices, commercial, and cultural and recreational activities. The growth in activities in the area is projected to add to the current safety and congestion problems. This study addresses current and potential future problems.

## Study Area

The study area is defined by Spring St-Cedar Rd. to the north, Fenton St. to the east, 16<sup>th</sup> St. to the west and the DC line to the south. The core area, which is the focus of this study, is bounded by:

- Wayne Ave. from Fenton St. to north of Cameron St,
- Georgia Ave. from north of Cameron St. to south of Wayne Ave., and
- Colesville Rd. from north of Spring St. to south of Wayne Ave



## Goals

The specific goals for this study, which provide a framework for the evaluation of alternatives are:

- Reduce Pedestrian and Bicycle Crashes
- Improve Pedestrian And Bicycle Facilities
- Maintain/ Improve Vehicle And Transit Mobility

## **Data collected**

The data collected for the Silver Spring CBD was extensive and included the following:

- Planned developments
- Pedestrian crash data
- Pedestrian volumes
- Bus stops and bus volumes
- Vehicle traffic volumes
- Geometric characteristics of roads
- Through traffic survey
- Vehicle speed
- Pedestrian/ vehicle conflicts
- Pedestrian compliance to signals
- Sidewalk inventory (ADA compliance)
- Parking inventory

## **Problems Identified in the CBD**

Problems identified in the CBD include the following:

### **Pedestrian Crashes**

In the four-year period from 1997-2000, 68 crashes were reported, resulting in 70 pedestrian injuries and 3 pedestrian fatalities.

### **Through Traffic**

The origin-destination survey conducted especially for this study, shows that about 40% of the trips that drive through the downtown are "through traffic", meaning neither their destination nor their origin is in downtown.

### **Low Compliance to Pedestrian Traffic Signals**

It has been observed that more than 45% of the pedestrians cross illegally (i.e. start to cross on DON'T WALK or Flashing DON'T WALK).

## **Pedestrian - Vehicle Conflicts**

Locations with a high frequency of pedestrian-vehicle conflicts have been identified. A conflict occurs when the pedestrian or vehicle has to take evasive action in order to prevent a crash.

### **Midblock Crossings**

Pedestrians were observed crossing between intersections, outside marked crosswalks. These crossings are a hazard to the pedestrian, as they conflict with the vehicular movement and can cause the pedestrian to be struck by a vehicle.

### **Elevated Vehicle Speeds**

The data collected shows that during peak hours, vehicles were traveling below the speed limit, which is 30 MPH. However, during off-peak hours, vehicles were traveling slightly over the speed limit, which is 30 MPH.

## **Pedestrian Safety Measures Considered**

An entire array of measures aimed at achieving the objectives of the study were considered. The measures considered were:

- Change signal timing to add pedestrian crossing time;
- Design medians for pedestrian refuge;
- Reduce crossing distance at crosswalks;
- Clearly delineate crosswalks (e.g. Imprinted pavement);
- Add pedestrian traffic signal on Georgia Ave. At Ellsworth Dr;
- Incorporate Intelligent Transportation Systems Technology;
- Pedestrian-vehicle buffers and median barriers;
- Apply ADA access board guidelines;
- Improve street lighting;

- Add on-street parking;
- Incorporate wayfinding;
- Reroute traffic;
- Implement one-way street system;
- Reduce right-turn-on-red;
- Improve speed limit signage;
- Relocate transit stops and improve treatments;
- Encourage use of alternative modes of transportation (transit, bicycle).

### **Alternative Packages**

#### **No-Build (Programmed Improvements)**

1. Signalized crosswalk across Georgia Ave. at Ellsworth Dr.
2. Intersection improvements
  - a. Georgia and Wayne Aves.
  - b. Colesville Rd. and Dale Dr.

#### **Effects**

1. Vehicles block Ga. Ave. pedestrian crosswalk at Ellsworth Dr. during PM peak hour
2. No enhancements to pedestrian safety
3. Congestion experienced by vehicles entering CBD on SB Colesville Rd.

#### **Alternative 1 (Pedestrian Facility Enhancements)**

1. No-Build +
2. Pedestrian/vehicle buffers
3. Median barriers
4. Pedestrian refuge on south leg of Georgia Ave. at Colesville Rd.
5. Pedestrian refuge at midblock crosswalk on East-West Hwy
6. Countdown pedestrian signals
7. Imprinted pavement at crosswalks
8. Bus stop relocation
9. Enhanced visibility of 30 mph speed limit at all entrances to CBD
10. Wayfinding signs
11. Reduced Right Turns on Red

#### **Effects**

- Vehicular traffic conditions same as No-Build
- Low cost improvements may enhance safety and aesthetics, but many are unproven

#### **Alternative 2 (Pedestrian Signal Enhancements)**

1. Alternative 1 +
2. Encourage with signage the diversion of through trips:
  - a. Prohibit left at Colesville Rd. from eastbound East-West Hwy: traffic rerouted through 16th St. and Spring St
  - b. Through trips on Colesville Rd.: signed to 16<sup>TH</sup> St. and Spring St.
  - c. Through trips on Georgia Ave: signed to 16<sup>th</sup> St. and East-West Hwy.
  - d. Associated intersection modifications
3. Provide 30% more WALK time (option A), or
4. Pedestrian favored phasing (option B)

#### **Effects**

1. Over 10% more vehicular delay than No-Build
2. Increase in allotted pedestrian signal time in core
  - a. Option A (More Walk Time) - 30%
  - b. Option B (Pedestrian Favored Phasing)- 75%
3. Limited diversion of trips from Ga. Ave. and Colesville Rd.
4. Limited reduction in pedestrian vehicle conflicts with Option B



### Alternative 3 (Colesville Road 1-Way)

1. Alternative 1 +
2. Additional on-street parking
3. Bulb-outs at crosswalks
4. Additional two-way bike-ways on Cameron St. and Second Ave.
5. One-way pairs:
  - a. Colesville Rd. northbound from Second Ave. to Spring St
  - b. Southbound trips to CBD redirected to Spring St, Cameron St. and Second Ave
6. Southbound through trips redirected to Spring St. and 16<sup>th</sup> St.
7. Options-
  - a. Bike-way on Cameron St. from Spring St. to Georgia Ave
  - b. Excludes bike-way - addition of double left turn at intersection of Cameron St. and Georgia Ave. to southbound Georgia Ave

#### Effects

1. 10% less vehicular delay than no-build alternative
2. Reduction in conflicting pedestrian/vehicular movements in core
  - a. 50% of total
  - b. 45% at high activity intersections
3. On average 90% increase in allotted pedestrian signal time in core
4. 10% reduction pedestrian crossing distance at core intersections
5. Approximately 2,000 feet of new bicycle paths
6. Increased sidewalk widths
7. Vehicles that previously used westbound Colesville Rd. are forced to reduce speed during off-peak

### Alternative 4 (Colesville Rd. and Ga. Ave. 1-way)

1. Alternative 3 +
2. Additional on-street parking on Georgia Ave.
3. Additional two-way bike-ways:
  - a. Georgia Ave. between Wayne Ave. and Spring St.
  - b. Spring St. between Cameron St. and Second Ave.
4. Additional one-way streets:
  - a. Northbound Georgia Ave. between Wayne Ave. and Spring St.
  - b. Spring St. between Cameron St. and Second Ave.
  - c. Northbound Colesville Rd. between East-West Hwy. and Second Ave.
  - d. Second/Wayne Ave. from Spring St. to Georgia Ave.

#### Effects

1. 10 % more vehicular delay than no-build alternative
2. Reduction in conflicting pedestrian/vehicular movements in core
  - a. 80% of total
  - b. 70% at high activity intersections
3. On average 70% increase in allotted pedestrian signal time in core
4. 20% reduction pedestrian crossing distance at core intersections
5. Approximately 7,000 feet of new bicycle paths
6. Vehicles that previously used southbound Georgia Ave. are forced to reduce speed during off-peak

Following is a table that provides the relative effectiveness of the four alternatives relative to eleven measures. A partial green ball indicates that the alternative is better than the No-build and a solid green ball indicates that it is much better. A partial red ball and a solid red ball indicate that the alternative is not as good as the No-Build alternative for the measure. The uncolored ball indicates that there is no difference between the no-build and the alternative.

## Measures of Effectiveness

Measure of Effectiveness	Alt. 1 Enhance Ped Facilities	Alt. 2 Enhance Ped Signals		Alt. 3 Colesville Rd 1-Way	Alt. 4 Colesville Rd. & Ga. Ave. 1-Way
		A 30%	B Phasing		
No. of Conflicting Pedestrian -Vehicle Movements	○	○	◐	●	●
Crossing Distance & Crossing Time	○	○	○	◐	●
ADA Compliance	◐	◐	◐	◐	◐
Sidewalk	○	○	○	●	●
Pedestrian Refuge Areas	◐	◐	◐	●	●
Continuous Pedestrian-Vehicle Buffers	●	●	●	◐	◐
Non-Continuous Pedestrian-Vehicle Buffers	○	○	○	●	●
Number of Midblock Bus Stops	●	●	●	●	●
Vehicular Delay	○	◐	◐	◐	◐
Colesville Rd. Peak Travel Time (EB/WB)	○	◐/◐	◐/◐	◐/◐	●/●
Georgia Ave. Peak Travel Time (NB/SB)	○	◐/◐	◐/◐	◐/◐	◐/●

**Editor's note: Color version of graphic only provided in copies to Planning Board members. Circles are shaded either green to indicate a benefit or red to indicate an adverse impact. The only red shaded circles appear within the last three rows under Alternatives 2 and 4; all other circles are green. (M-NCPPC staff, February 2003)**