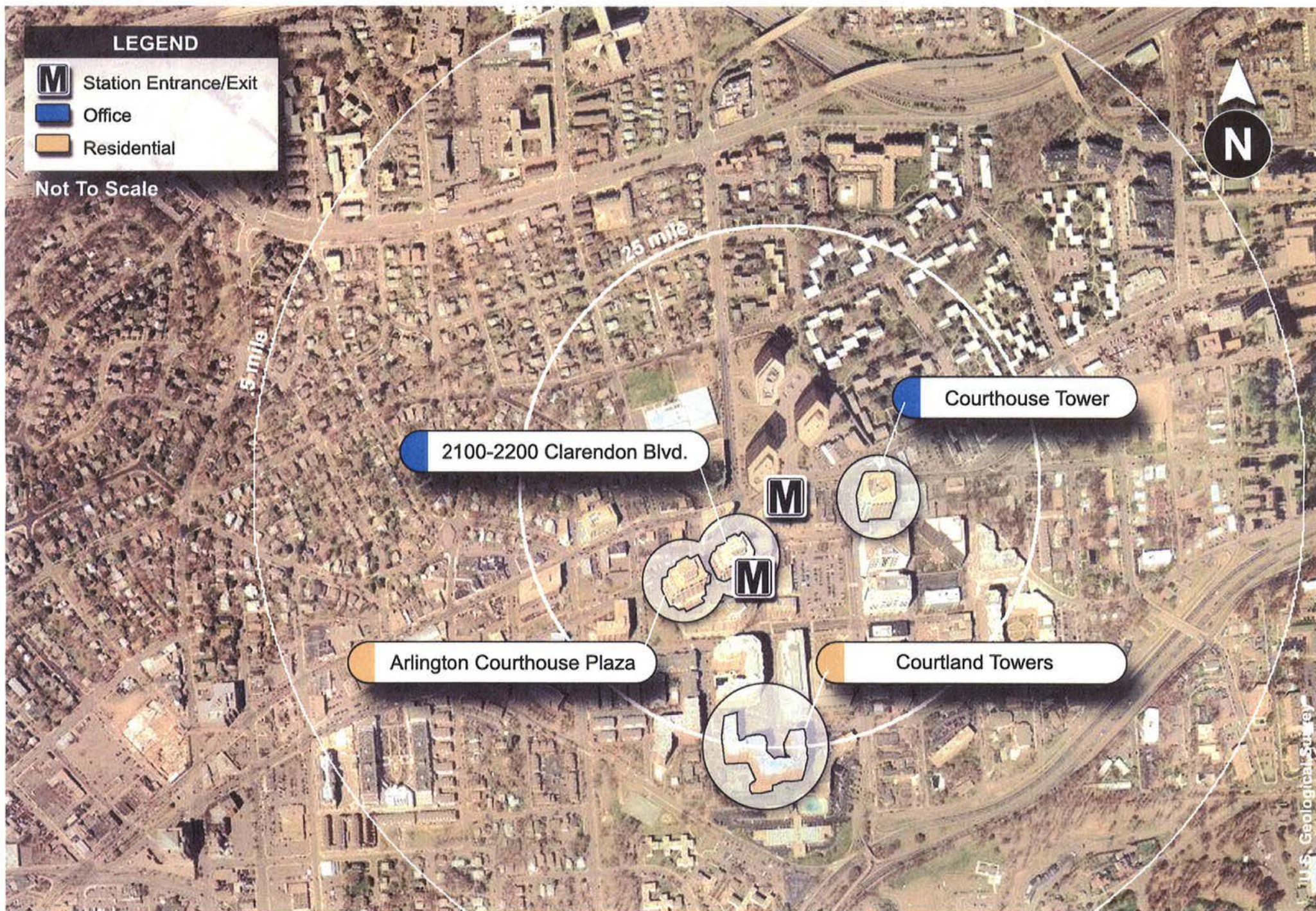




**Figure 2: Ballston Station Area Sites**





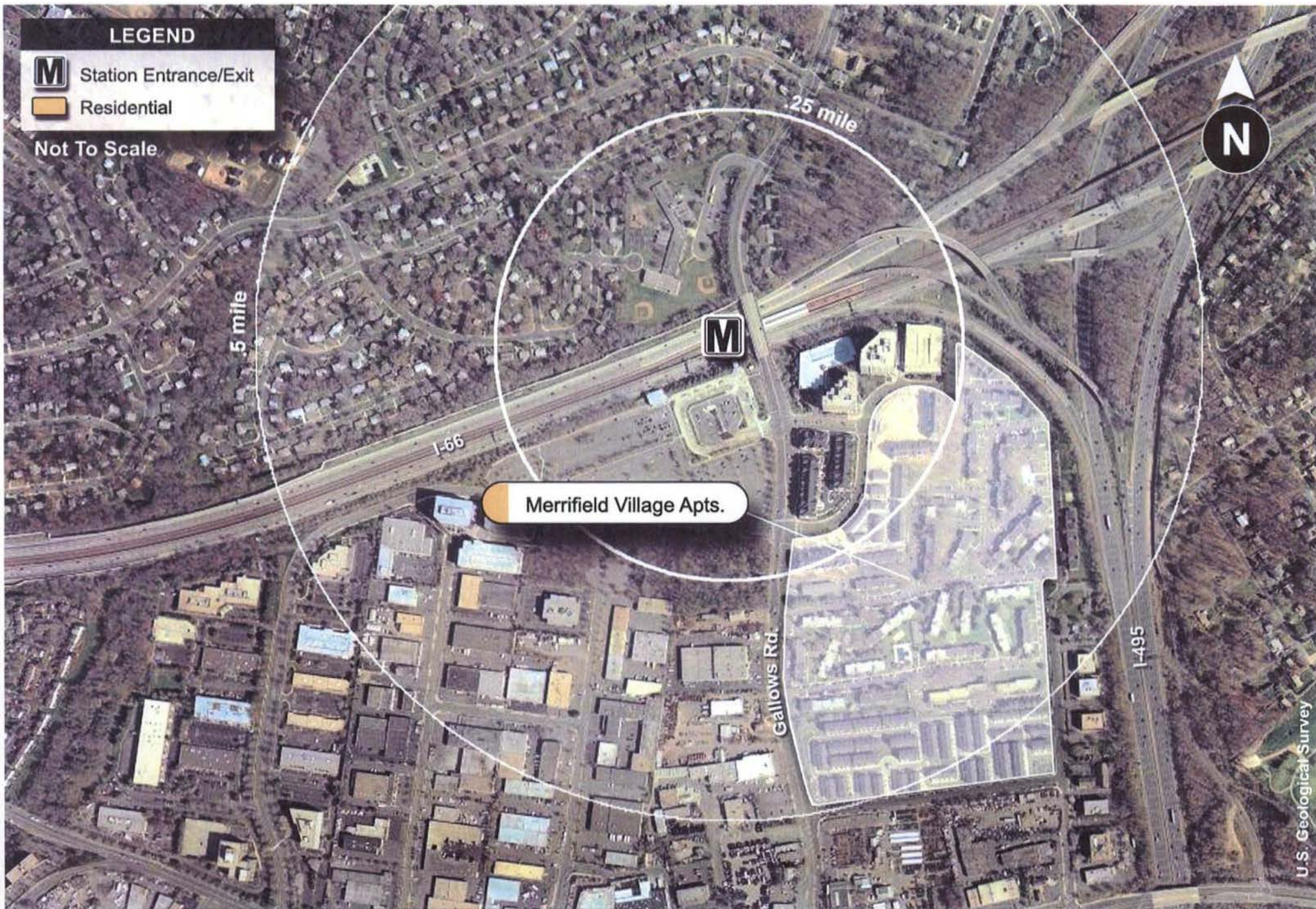
**Figure 3: Courthouse Station Area Sites**





**Figure 4:** Crystal City Station Area Sites





**Figure 5:** Dunn-Loring-Merrifield Station Area Sites





**Figure 6:** Eisenhower Avenue and King Street Station Area Sites



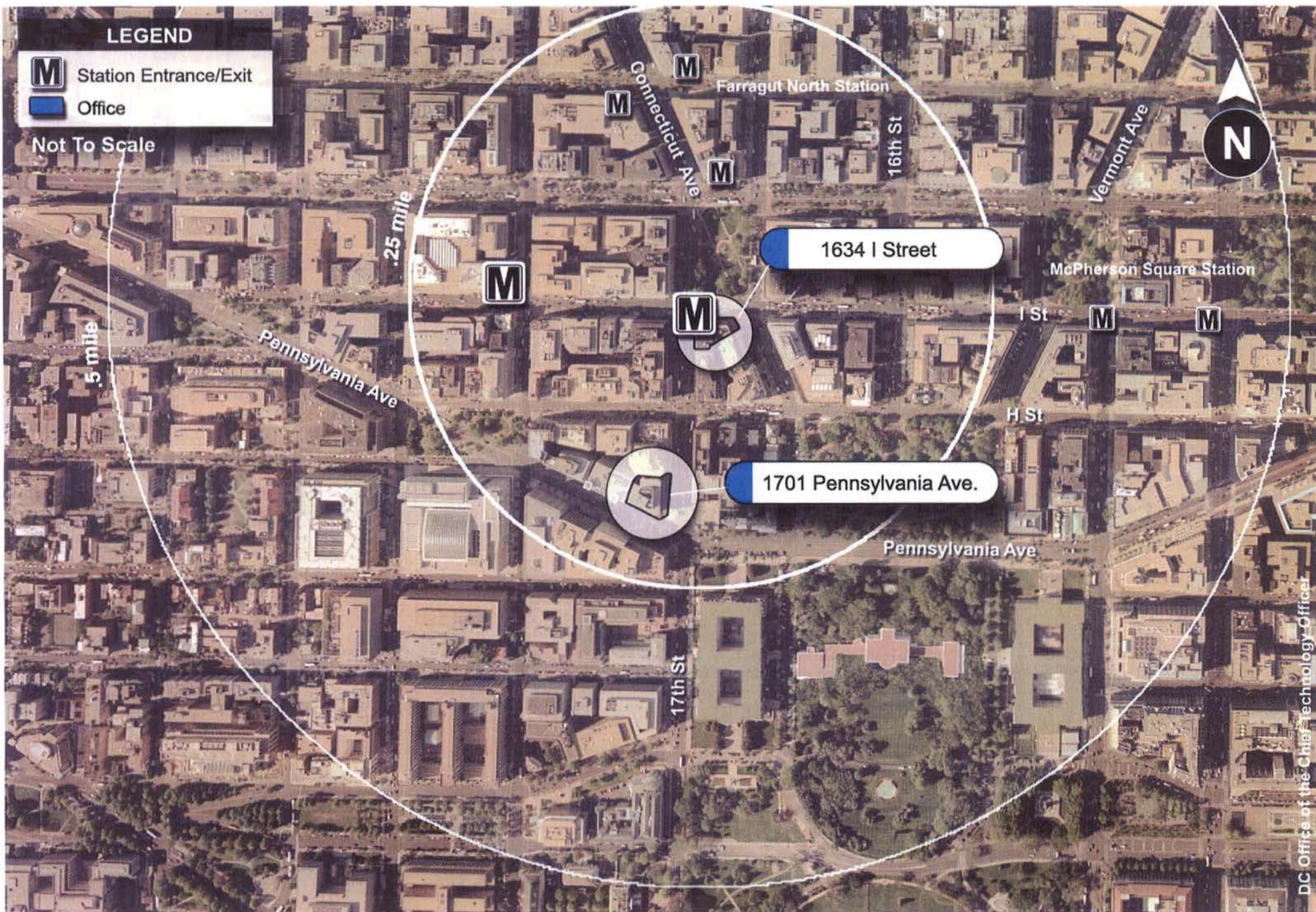


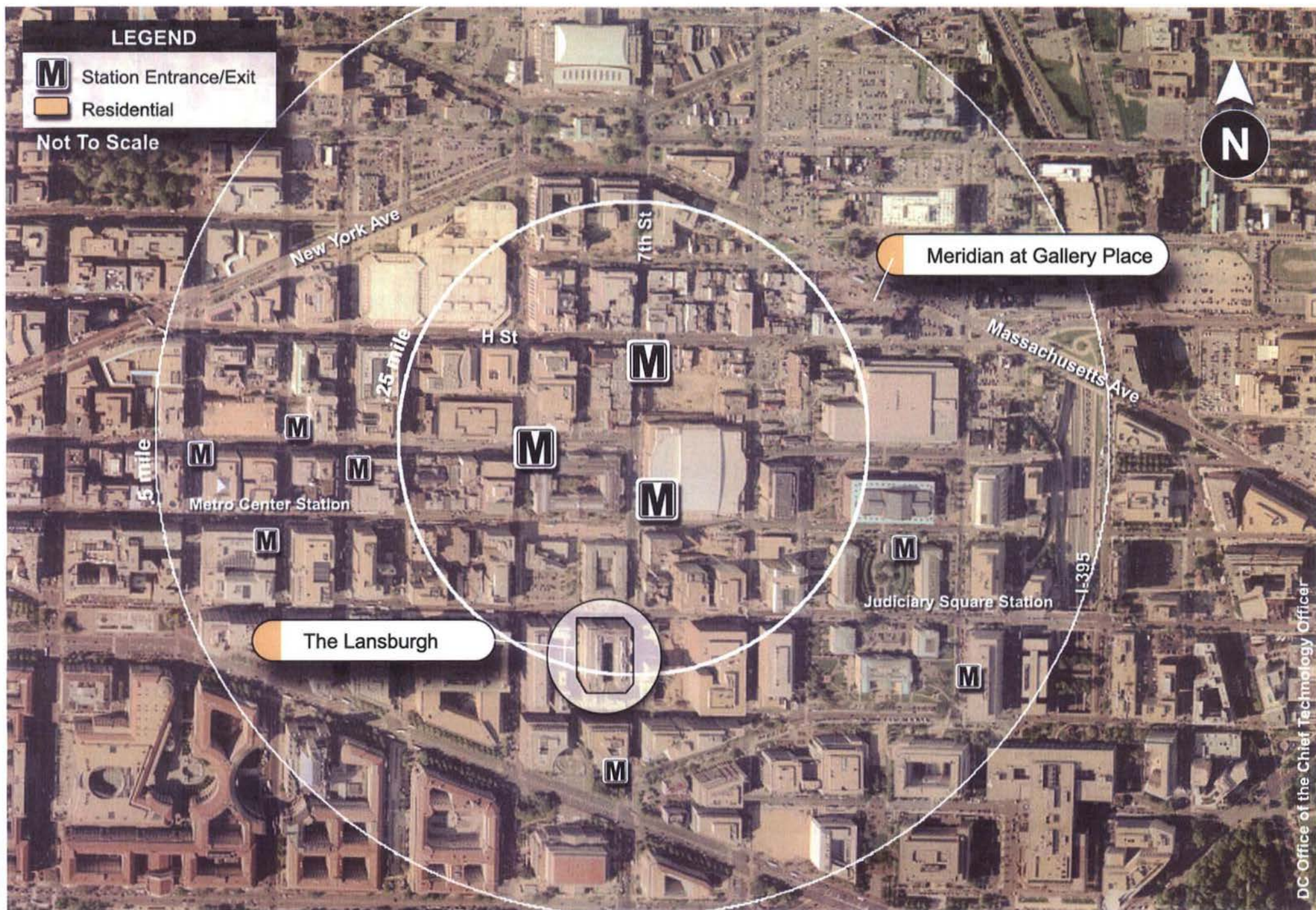
Figure 7: Farragut West Station Area Sites





**Figure 8:** Friendship Heights Station Area Sites





**Figure 9:** Gallery Place-Chinatown Station Area Sites





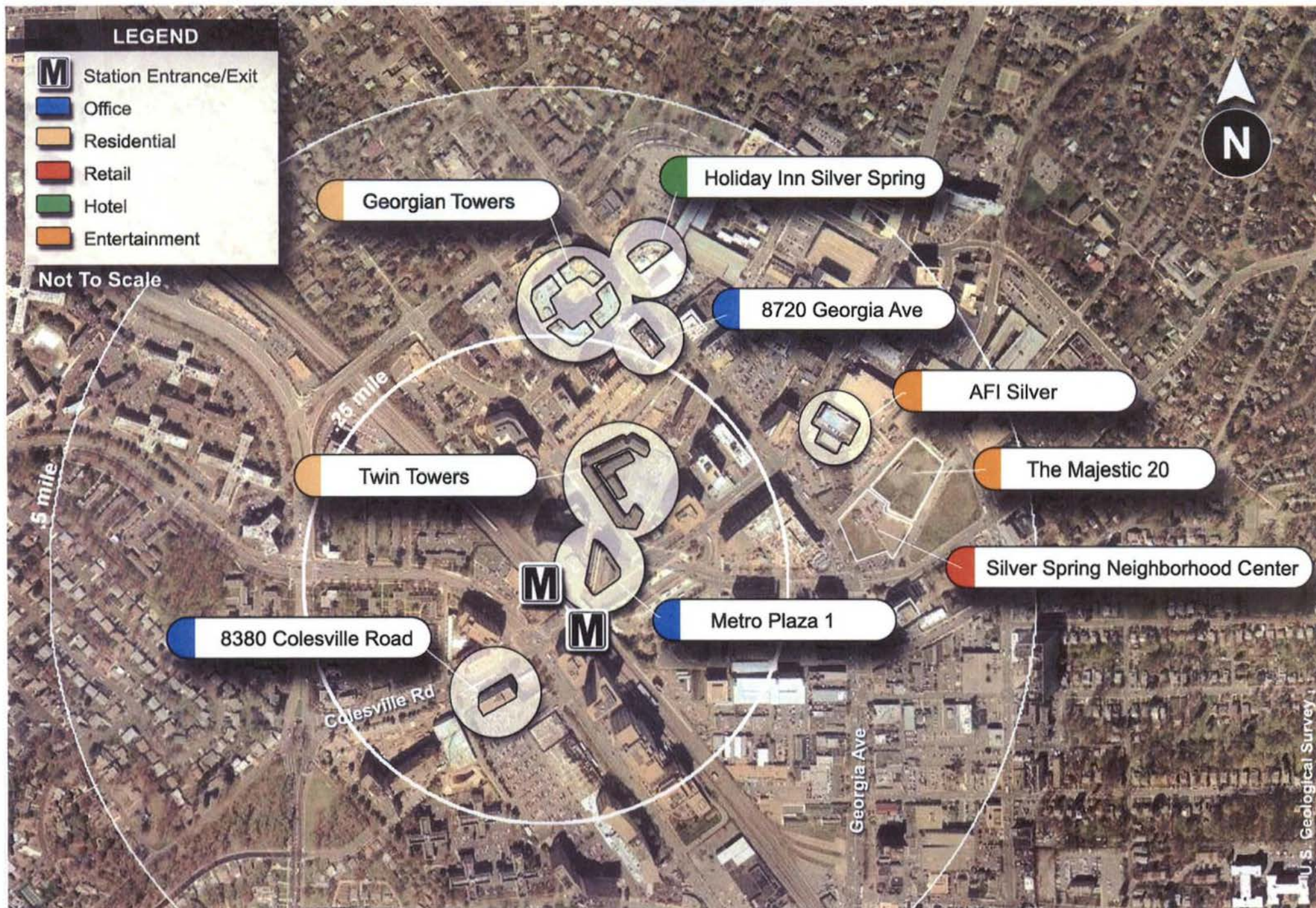
**Figure 10:** Grosvenor-Strathmore Station Area Sites





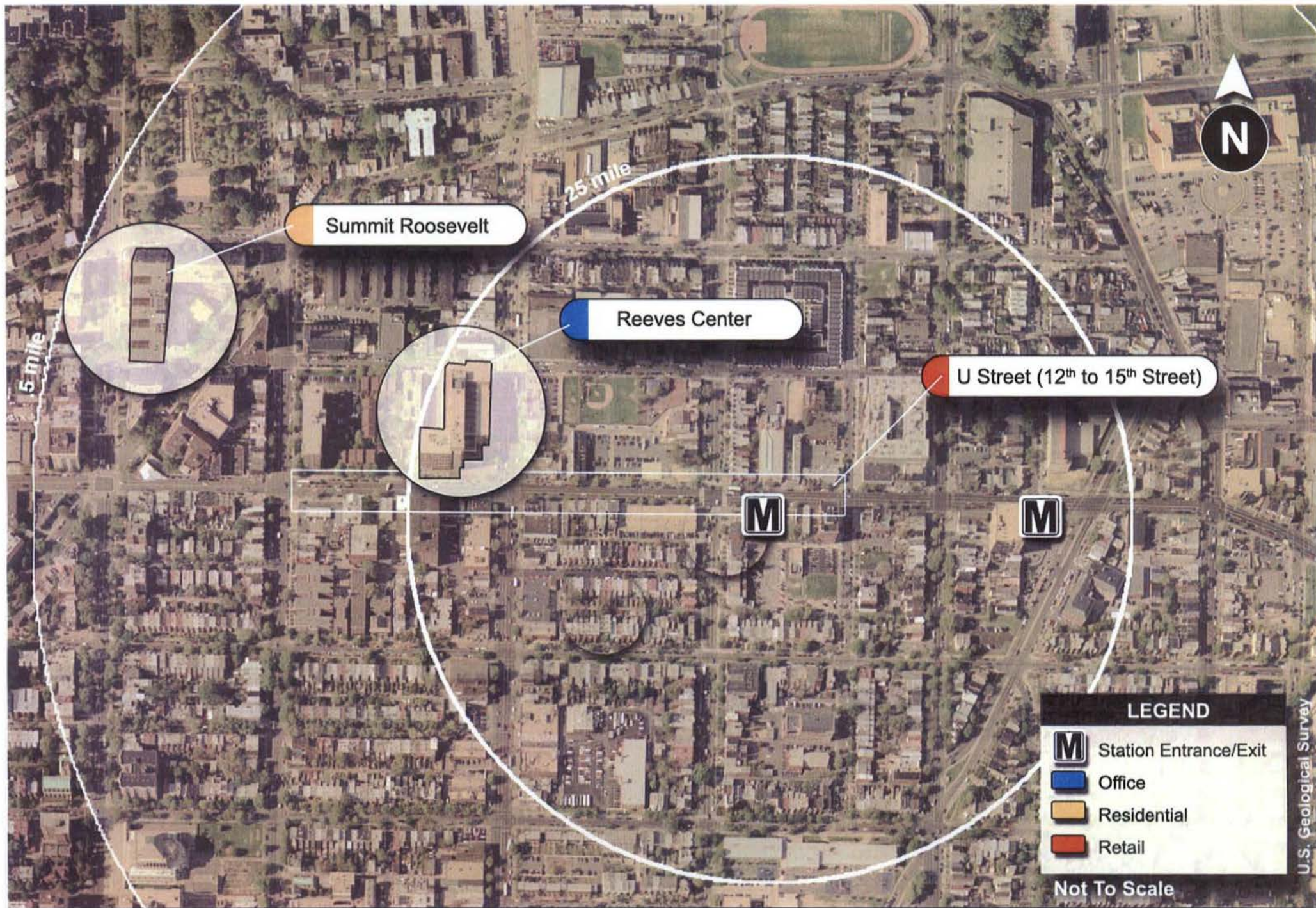
**Figure 11: New Carrollton Station Area Sites**





**Figure 12:** Silver Spring Station Area Sites





**Figure 13:** U Street/African American Civil War Memorial/Cardozo Station Area Sites



### **3. Data Collection**

At each site, data about the travel characteristics of individuals who work, live, shop or use the sites were collected through a series of questionnaires conducted through self-administered survey forms and oral intercept interviews. At office sites, building managers provided total employee figures for the site and self-administered surveys were distributed to every employee or worker at the participating site. Intercept oral interviews were conducted with visitors to the site. Office workers who participated in the survey returned the forms to designated “drop boxes” placed throughout the site and project staff returned at designated intervals to collect the completed surveys. At residential sites, self-administered surveys were distributed by hand or via U.S. mail to every unit at the participating site. Residents returned their completed surveys by postage-paid mail. Data collection at retail, hotel and entertainment (movie theater) sites was conducted exclusively through intercept oral interviews. Interviews at retail sites included both patrons and employees. Interviews at hotels included only overnight guests and visitors. Interviewers at entertainment (movie theater) sites included only moviegoers.

More detailed information about the data collection process can be found in Appendix B



## **4. Survey Results**

All valid data were entered into a Microsoft Access database. Data were analyzed using SPSS software, resulting in frequency distributions and cross-tabs sorting the findings based on a selected independent variable.

In addition, simple regression analyses were conducted to test whether external physical characteristics of the station areas, competition from the auto mode, and transit service levels influence mode share characteristics. Regression is a statistical technique used to determine the degree to which a dependent variable correlates with one or more independent variables, and, and is often used for predictive purposes. Regression equations are not perfect predictors, and should only be used as tools for general planning purposes in conjunction with other available planning tools. The explanatory power of a regression equation is summarized in the R-squared value, which represents the proportion of variance in the dependent variable that can be explained by the independent variable(s). If all the variance could be explained, the R-squared value would be 1.0.

Candidate independent variables tested or experimented with included characteristics internal to the sites, such as square footage, number of employees, or residential units; walking distance between the site and Metrorail station; density of jobs and housing within the station area; and indicators of auto competition and transit service levels.

### **4.1 Office Sites**

The 17 office sites surveyed are located at distances from Metrorail stations varying from zero (building situated on or directly next to station exit) to 3,000 feet (see Table 2). Approximately 9,800 survey forms were distributed, resulting in an average response rate of about 15 percent. As a point of reference, in 1989, about 9,500 surveys were distributed with a 27 percent return rate. As noted in the Introduction, increased concerns about divulging personal information may be a factor in the change in response rates.

Thirteen office sites allowed intercept interviews, which resulted in 499 survey responses.

#### **4.1.1 Frequency Analysis**

As shown in Table 3, an average of 25 percent of office survey respondents reported that they used Metrorail to commute to work. However, among the individual sites, there were wide deviations in that figure. The two sites located in Downtown DC near the Farragut West Station (1634 I Street and 1701 Pennsylvania Avenue) showed Metrorail commute rates averaging 61 percent. In the Downtown core, parking is constrained and costly, traffic is heavy and streets are congested, and there is a significant amount of pedestrian activity. At the other end of the scale, 8400 Corporate Drive, located near the New Carrollton Station, showed a Metrorail use rate of only eight percent. The New Carrollton Station is located at the terminus of the Orange line in an area characterized as suburban office with ample free parking and good highway access. In contrast, the average auto use rate among all the sites was 62 percent, which ranged from a high of 89 percent at 8400 Corporate Drive to a low of 16 percent at 1634 I Street.



**Table 2**  
**Characteristics of Surveyed Office Sites**

Office Site	Number of Surveys Distributed	Distance from Station (feet)	Square Footage (1,000s)	Occupancy Rate (%)	Parking Spaces	Estimated Response Rate (%)	Number of Interviews
<b>Ballston Station Area</b>							
3 Ballston Plaza	932	2,000	303	87	753	15	10
Ballston One	267	1,900	230	—	450	5	N/A
<b>Court House Station Area</b>							
2100-2200 Clarendon Blvd.	850	0	584	—	1681 <sup>4</sup>	47	61
Courthouse Tower	500	450	165 <sup>2</sup>	—	430	4	15
<b>Crystal City Station Area</b>							
Crystal Park IV	1227	2,600 <sup>1</sup>	484	89	1,122	6	35
Crystal Square 2	851	850	412	—	1,899 <sup>5</sup>	15	60
<b>Farragut West Station Area</b>							
1634 I Street	138	0	69	100	0	51	53
1701 Pennsylvania Avenue	275	1,000	190	90	N/A <sup>6</sup>	32	18
<b>Friendship Heights Station Area</b>							
2 Wisconsin Circle	800	100	235	90	301	11	32
Chevy Chase Plaza	400	700	163	—	225	6	N/A
<b>King Street Station Area</b>							
333 John Carlyle	250	1,400	153	95	280	17	N/A
King Street Station	250	700	784	75	1,159	13	N/A
<b>New Carrollton Station Area</b>							
8400 Corporate Drive	550	3,000	149	—	503	7	17
<b>Silver Spring Station Area</b>							
8380 Colesville Road	228	600	74	93	400	26	51
8720 Georgia Avenue	400	1,600	87	—	129	19	36
Metro Plaza 1	364	200	619	90	442	7	5
<b>U Street/African American Civil War Memorial/Cardozo Station Area</b>							
Reeves Center	1550	950	512 <sup>3</sup>	—	255	7	106

Notes: <sup>1</sup> Distance was measured via an indoor route, in this case, via underground corridors. The walking distance may be less if measured partially outdoor.

<sup>2</sup> This figure does not include 84,000 square feet occupied by one tenant that did not participate in the survey. Total square footage for Court House Tower is 249,000.

<sup>3</sup> Includes first floor lobby.

<sup>4</sup> Parking for the 2100-2200 Clarendon Blvd. is shared with other Court House Plaza users and includes 197 spaces for 2200 Clarendon.

<sup>5</sup> Parking for Crystal Square 2 is shared with other buildings in Crystal Square.

<sup>6</sup> Only valet parking is available, and cars valet parked are stacked.

”—": Unknown or unavailable; NA: Not Applicable.



**Table 3**  
**Commute Mode Share at Office Sites**

Office Site	Mode			
	Metrorail <sup>1</sup>	Metrobus & Other Transit <sup>2</sup>	Auto <sup>3</sup>	Walk & Other <sup>4</sup>
<b>Ballston Station Area</b>				
3 Ballston Plaza	17%	1%	79%	2%
Ballston One	8%	0%	85%	8%
<b>Court House Station Area</b>				
2100-2200 Clarendon Blvd.	20%	2%	70%	8%
Courthouse Tower	35%	5%	60%	0%
<b>Crystal City Station Area</b>				
Crystal Park IV	12%	2%	81%	5%
Crystal Square 2	28%	14%	58%	1%
<b>Farragut West Station Area</b>				
1634 I Street	69%	7%	16%	7%
1701 Pennsylvania Avenue	56%	16%	25%	3%
<b>Friendship Heights Station Area</b>				
2 Wisconsin Circle	31%	1%	67%	0%
Chevy Chase Plaza	43%	0%	57%	0%
<b>King Street Station Area</b>				
333 John Carlyle	26%	19%	50%	5%
King Street Station	10%	19%	71%	0%
<b>New Carrollton Station Area</b>				
8400 Corporate Drive	8%	3%	89%	0%
<b>Silver Spring Station Area</b>				
8380 Colesville Road	9%	7%	74%	9%
8720 Georgia Avenue	13%	6%	77%	4%
Metro Plaza 1	17%	26%	43%	13%
<b>U Street/African American Civil War Memorial/Cardozo Station Area</b>				
Reeves Center	26%	9%	58%	7%
<b>Average Among All Sites</b>	<b>25%</b>	<b>9%</b>	<b>62%</b>	<b>6%</b>

Notes: <sup>1</sup> Includes multimodal trips that may have involved auto or bus use in combination with Metrorail.

<sup>2</sup> Includes bus only trips, and commuter rail, such as MARC, VRE or Amtrak.

<sup>3</sup> Includes trips as driver and passenger of a private automobile.

<sup>4</sup> Includes cycling and any other form of transportation one may use.

When sorted by concentric location typology (CBD location, Suburban-inside the Beltway and Suburban-Outside the Beltway) as shown in Table 4, wide variations in modal splits result. For those sites in CBD locations, which only included the two sites in the Farragut West station area, Metrorail usage for commute trips averaged 63 percent. For those sites located in Suburban-inside the Beltway and Suburban-Outside the Beltway locations, the Metrorail usage averages were 21 percent and 8 percent respectively. However, only one office, 8400 Corporate Drive, is located in a Suburban-Outside the Beltway location.

Office workers who live in the District were much more likely to use Metrorail than those who live in other jurisdictions. Forty-four percent of District respondents said that they used Metrorail for their commute trip. In addition, nine percent of District respondents used other



transit modes, and only 41 percent reported driving to work. The jurisdiction with the second highest rate of Metrorail use was Prince George's County at 35 percent.

**Table 4**  
**Commute Mode Share at Office Sites by Concentric Location Typology**

Typology	Mode			
	Metrorail <sup>1</sup>	Metrobus & Other Transit	Auto	Walk & Other
CBD	63%	12%	21%	5%
Suburban-Inside the Beltway	21%	9%	66%	6%
Suburban-Outside the Beltway	8%	3%	89%	0%

Overall, Metrorail use among the respondents decreased as the number of vehicles owned in the household increased. Seventy-six percent of respondents whose households have no vehicles (six percent of all respondents) used transit (Metrorail, bus or other type), and 63 percent used Metrorail. Conversely, only 16 and 18 percent of respondents whose households have three (15 percent of all respondents) and four or more vehicles (six percent of all respondents) used Metrorail, respectively.

Most workplace respondents reported that their employers subsidized use of their commuting mode of choice. For transit users, 62 percent reported that their employers pay for or subsidize their transit fares, some of which may include employer participation in government programs that subsidize transit use. For auto users, 72 percent reported that their employers provide free parking or subsidize their parking costs.

Table 5 highlights mode share at offices for midday trips. Some sites such as Courthouse Tower, Crystal Square 2, the Farragut West Station sites, the Friendship Heights Station sites, and Metro Plaza 1, reported fairly high percentages of midday walk trips. Each of these sites is located in an area with ample business, retail and eating establishments. The sites with high auto use rates for midday trips also tended to have high auto use for commute trips.

The transit (Metrorail and Metrobus & Other Transit modes) mode share for office visitors averaged 23 percent, which was slightly greater than the average percentage of visitors who walked to the office site (see Table 6). Similar to the office commute and midday trips, wide deviations in mode shares were reported for individual sites. Those sites located in high-density areas, such as the Farragut West and Crystal City sites tended to have a high percentage of visitors arriving by walk mode. These sites contain a mixed of land uses.

More detailed information about the frequency analysis conducted for office sites can be found in Appendix C.1.1.



**Table 5**  
**Mode Share for Midday Trips at Office Sites**

Office Site	Mode				Total Trips Reported
	Metrorail	Metrobus & Other Transit	Auto	Walk & Other	
Ballston Station Area					
3 Ballston Plaza	9%	9%	68%	14%	148
Ballston One	36%	0%	45%	18%	22
Court House Station Area					
2100-2200 Clarendon Blvd.	20%	1%	55%	24%	427
Courthouse Tower	26%	0%	22%	52%	23
Crystal City Station Area					
Crystal Park IV	9%	0%	70%	21%	158
Crystal Square 2	34%	2%	25%	38%	131
Farragut West Station Area					
1634 I Street	56%	0%	2%	42%	89
1701 Pennsylvania Avenue	51%	4%	11%	35%	81
Friendship Heights Station Area					
2 Wisconsin Circle	33%	0%	29%	38%	110
Chevy Chase Plaza	10%	0%	33%	57%	21
King Street Station Area					
333 John Carlyle	20%	2%	63%	16%	51
King Street Station	16%	5%	58%	21%	19
New Carrollton Station Area					
8400 Corporate Drive	4%	4%	92%	0%	25
Silver Spring Station Area					
8380 Colesville Road	42%	4%	43%	11%	81
8720 Georgia Avenue	19%	4%	56%	21%	90
Metro Plaza 1	26%	9%	20%	46%	35
U Street / African American Civil War Memorial/Cardozo Station Area					
Reeves Center	19%	8%	48%	25%	156
Average Among All Sites	25%	3%	43%	28%	1667



**Table 6  
Office Visitor Mode Share**

Office Site	Mode			
	Metrorail	Metrobus & Other Transit	Auto	Walk & Other
<b>Ballston Station Area</b>				
3 Ballston Plaza	11%	0%	89%	0%
<b>Court House Station Area</b>				
2100-2200 Clarendon Blvd.	11%	0%	69%	20%
Courthouse Tower	43%	0%	36%	21%
<b>Crystal City Station Area</b>				
Crystal Park IV	6%	7%	67%	20%
Crystal Square 2	14%	6%	35%	45%
<b>Farragut West Station Area</b>				
1634 I Street	27%	0%	30%	43%
1701 Pennsylvania Avenue	9%	3%	40%	49%
<b>Friendship Heights Station Area</b>				
2 Wisconsin Circle	13%	0%	82%	5%
<b>New Carrollton Station Area</b>				
8400 Corporate Drive	0%	0%	97%	3%
<b>Silver Spring Station Area</b>				
8380 Colesville Road	8%	0%	87%	5%
8720 Georgia Avenue	12%	3%	74%	12%
Metro Plaza 1	43%	0%	29%	29%
<b>U Street /African American Civil War Memorial/Cardozo Station Area</b>				
Reeves Center	16%	18%	49%	17%
<b>Average Among All Sites</b>	<b>16%</b>	<b>7%</b>	<b>60%</b>	<b>22%</b>

#### 4.1.2 Regression Analysis

A number of independent variables were tested to determine if any explain the variation in mode choice characteristics for commute, midday and visitor trips to or from the surveyed office sites. In addition to variables internal to the survey sites, such as square footage, and variables relating to transit service, the following variables were of particular interest:

- Distance between station and site;
- Job density within 3/4 mile of the station (number of jobs per acre); and
- Street density within 3/4 mile of the station (total miles of street per square mile), which was used as a proxy for the state of the pedestrian environment.

Because the two Farragut West office sites, which are located in the downtown core, exhibited modal characteristics far different than the other sites (see Table 3), after the initial analysis these sites were removed from the equation as a sensitivity test to determine if the correlations still held true, which they did.



Distance between station and site was the only variable among the ones tested that showed a significant correlation with the worker commute, midday and visitor mode choice. The R-square value for Metrorail commuting was a modest 0.25 under this variable. The correlation indicates that about 35 percent of all commute trips to and from an office site would be on Metrorail if the site is located directly at the station exit/entrance. This percentage decreases by 0.96 percent for every 100 ft. increase in the distance an office site is located from the station exit/entrance (see Figure 14). For midday trips taken by office workers, the correlation indicates that Metrorail use decreases by 0.87 percent for every 100 ft. increase in the distance an office site is located from the station exit/entrance (R-square of 0.28). For visitor trips, the correlation indicates that Metrorail use decreases by 0.78 percent for every 100 ft. increase in the distance an office site is located from the station exit/entrance (R-square of 0.34). Table 7 summarizes the predictive outcomes for office commute, midday and visitor Metrorail trips by distances of zero, one-quarter mile and one-half mile from a Metrorail station.

**Table 7**  
**Regression Equation Summary for All Office Metrorail Trips by Distance from Station**

Distance (mile)	Metrorail Mode Share		
	Commute	Midday	Visitor
0	35%	35%	24%
1/4	23%	23%	14%
1/2	10%	11%	4%

More detailed information about the regression analysis conducted for office sites can be found in Appendix C.2.1.

## **4.2 Residential Sites**

The 18 residential sites surveyed are located at distances from Metrorail stations varying from 150 to 2,800 feet (see Table 8). More than 7,800 survey forms were distributed and resulted in an average response rate of almost 12 percent. In 1989, almost 4,000 surveys were distributed and approximately 13 percent were returned.

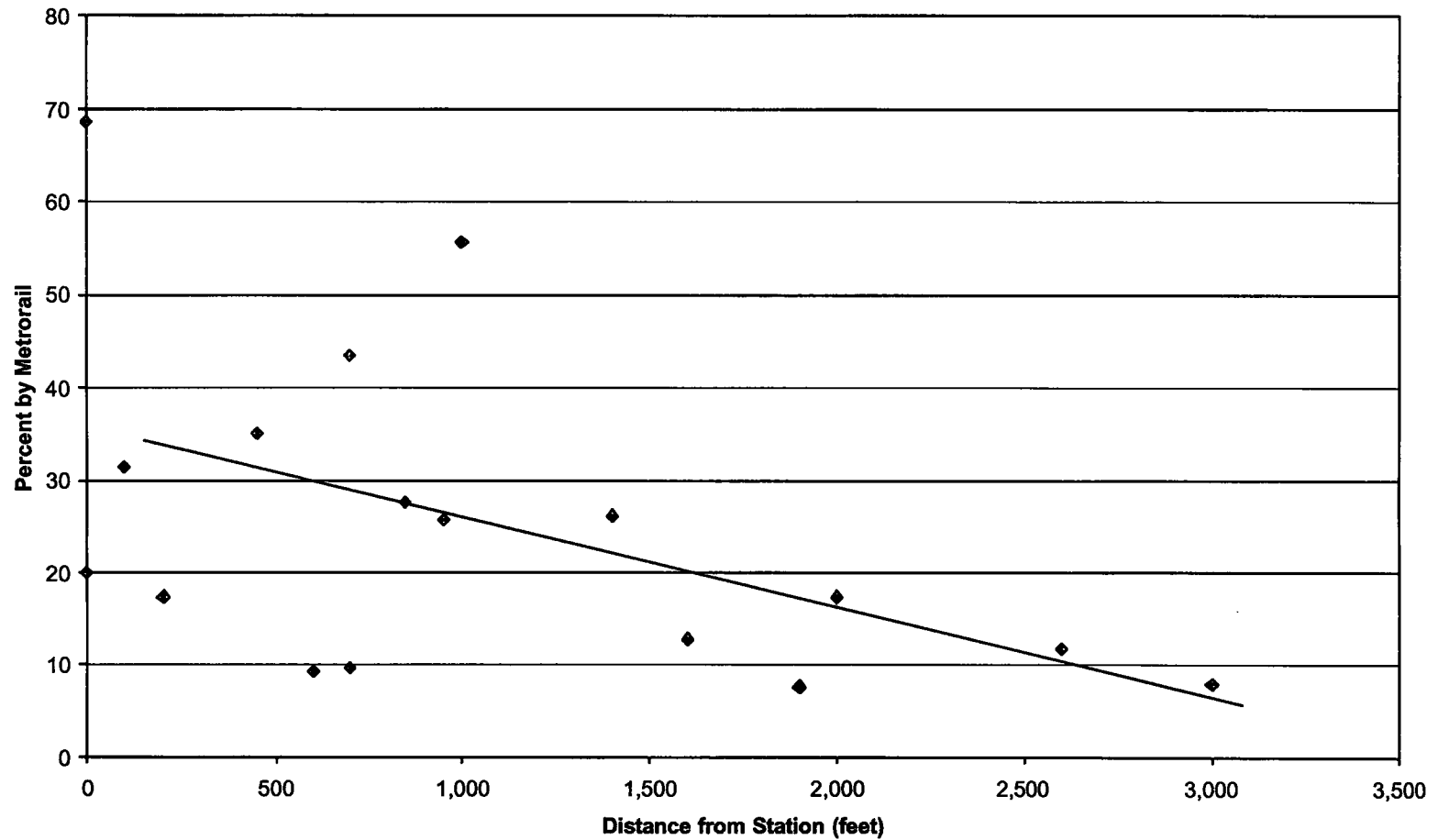
### **4.2.1 Frequency Analysis**

As shown in Table 9, an average of 41 percent of all trips from the surveyed residential sites used Metrorail, which was only slightly less than the average percentage of auto trips. Metrobus & Other Transit trips represented a relatively small share of overall trips. The Metrorail mode share ranged from a low of 17 percent at Grosvenor House Apartments<sup>3</sup> to a high of 61 percent at Meridian at Gallery Place.

<sup>3</sup> At the time of the survey, the Grosvenor House Apartments were in the process of being converted from rentals to condominiums. Therefore, its resident profile was in a state of flux. Nevertheless, the study team decided to proceed with surveying this site because it had been surveyed in 1989.



**Figure 14**  
**Office Commute Metrorail Usage by Distance from Station**





**Table 8**  
**Characteristics of Surveyed Residential Sites**

<b>Residential Site</b>	<b>Number of Units</b>	<b>Distance from Station (ft)</b>	<b>Parking Spaces</b>	<b>Est. Response Rate<sup>5</sup> (%)</b>
<b>Ballston Station Area</b>				
Lincoln Towers	714	1,100	1,310	9
Randolph Towers	509	1,250	711	11
<b>Court House Station Area</b>				
Arlington Courthouse Plaza	564	150	1,484 <sup>2</sup>	10
Courtland Towers	575	1,200	926	17
<b>Crystal City Station Area</b>				
Crystal Plaza Apartments	540	1,450 <sup>1</sup>	1,963 <sup>3</sup>	13
Crystal Square Apartments	378	600	1,899 <sup>4</sup>	16
<b>Dunn Loring-Merrifield Station Area</b>				
Merrifield Village	706	2,800	--	7
<b>Friendship Heights Station Area</b>				
Highland House West	308	1,350	--	20
North Park Apartments	310	2,700	450	8
<b>Gallery Place-Chinatown Station Area</b>				
Meridian at Gallery Place	462	1,700	--	9
The Lansburgh	385	500	700	10
<b>Grosvenor-Strathmore Station Area</b>				
Avalon at Grosvenor Station	499	1,400	771	12
Grosvenor Park I	399	1,700	--	6
Grosvenor House Apartments	404	2,300	--	25
Stoneybrook	120	2,500	--	28
<b>Silver Spring Station Area</b>				
Georgian Towers	858	1,700	--	7
Twin Towers	345	550	312	11
<b>U-Street/African American Civil War Memorial/Cardozo Station Area</b>				
Summit Roosevelt	196	2,600	--	14

Notes: <sup>1</sup> Distance provided is to the north tower. The distance to the south tower is 1,700 feet.  
<sup>2</sup> Parking for Arlington Courthouse Plaza is shared with the 2100-2200 Clarendon Blvd. offices.  
<sup>3</sup> Parking for Crystal Plaza Apartments is shared with other buildings in Crystal Plaza.  
<sup>4</sup> Parking for Crystal Square Apartments is shared with other buildings in Crystal Square.  
<sup>5</sup> Response rate excludes those surveys returned due to unit vacancy.  
"--": Unknown or not available.



**Table 9**  
**Mode Share for All trips by Residential Site**

Residential Site	Mode			
	Metrorail <sup>1</sup>	Metrobus & Other Transit <sup>2</sup>	Auto <sup>3</sup>	Walk & Other <sup>4</sup>
<b>Ballston Station Area</b>				
Lincoln Towers	50%	2%	38%	11%
Randolph Towers	45%	1%	40%	15%
<b>Court House Station Area</b>				
Arlington Courthouse Plaza	58%	0%	29%	14%
Courtland Towers	46%	0%	39%	15%
<b>Crystal City Station Area</b>				
Crystal Plaza Apartments	39%	0%	52%	9%
Crystal Square Apartments	53%	0%	42%	5%
<b>Dunn Loring-Merrifield Station Area</b>				
Merrifield Village	37%	1%	53%	9%
<b>Friendship Heights Station Area</b>				
Highland House West	33%	2%	53%	12%
North Park Apartments	32%	2%	57%	9%
<b>Gallery Place-Chinatown Station Area</b>				
Meridian @ Gallery Place	61%	6%	15%	18%
The Lansburgh	39%	6%	21%	34%
<b>Grosvenor-Strathmore Station Area</b>				
Avalon at Grosvenor Station	39%	1%	57%	3%
Grosvenor House Apartments	17%	0%	76%	7%
Grosvenor Park I	30%	2%	64%	5%
Stoneybrook	34%	1%	62%	4%
<b>Silver Spring Station Area</b>				
Georgian Towers	42%	10%	35%	14%
Twin Towers	49%	4%	27%	19%
<b>U-Street/African American Civil War Memorial/Cardozo Station Area</b>				
Summit Roosevelt	31%	20%	22%	27%
<b>Average Among All Sites</b>	<b>41%</b>	<b>4%</b>	<b>43%</b>	<b>13%</b>

Notes: <sup>1</sup> Includes multimodal trips that may have involved auto or bus use in combination with Metrorail.

<sup>2</sup> Includes bus only trips, and commuter rail, such as MARC, VRE or Amtrak.

<sup>3</sup> Includes trips as driver and passenger of a private automobile.

<sup>4</sup> Includes cycling and any other form of transportation one may use.

When sorted by concentric location typology (CBD location, Inside the Beltway and Outside the Beltway) as shown in Table 10, modal splits did not vary as widely as modal splits at the surveyed office sites. For those sites in CBD locations, which only included the two sites in the Gallery Place station area, Metrorail usage averaged 50 percent of all trips. For those sites located in Inside the Beltway and Outside the Beltway locations, the Metrorail usage averages were 43 percent and 31 percent for all trips, respectively.

About 46 percent of all trips reported were for work or school, and 55 percent of these trips were made on Metrorail (see Table C-18 in Appendix C). Auto was the most popular mode for trips made for personal business, meals and shopping purposes. Almost 40 percent of all trips from the 18 residential sites ended in the District (only three sites are located in the District), and



among these trips, 67 percent were made using Metrorail. Trips to other political jurisdictions did not come close to this rate of Metrorail use.

**Table 10**  
**Residential Mode Share for All Trips by Concentric Location Typology**

Typology	Mode			
	Metrorail	Metrobus & Other Transit	Auto	Walk & Other
CBD	50%	6%	18%	26%
Suburban-Inside the Beltway	43%	6%	39%	14%
Suburban-Outside the Beltway	31%	1%	62%	6%

Similar to the office commute results, auto ownership appears to influence mode choice among the surveyed households, with those households having relatively high auto ownership rates tending to use the auto mode more often. However, auto ownership rates were much lower than that reported by office workers, probably reflecting the higher density status of the households. One-vehicle households reported a 40 percent Metrorail use rate. Zero-vehicle and two-vehicle households reported 66 and 30 percent Metrorail use rates, respectively.

More detailed information about the frequency analysis conducted for residential sites is provided in Appendix C.1.2.

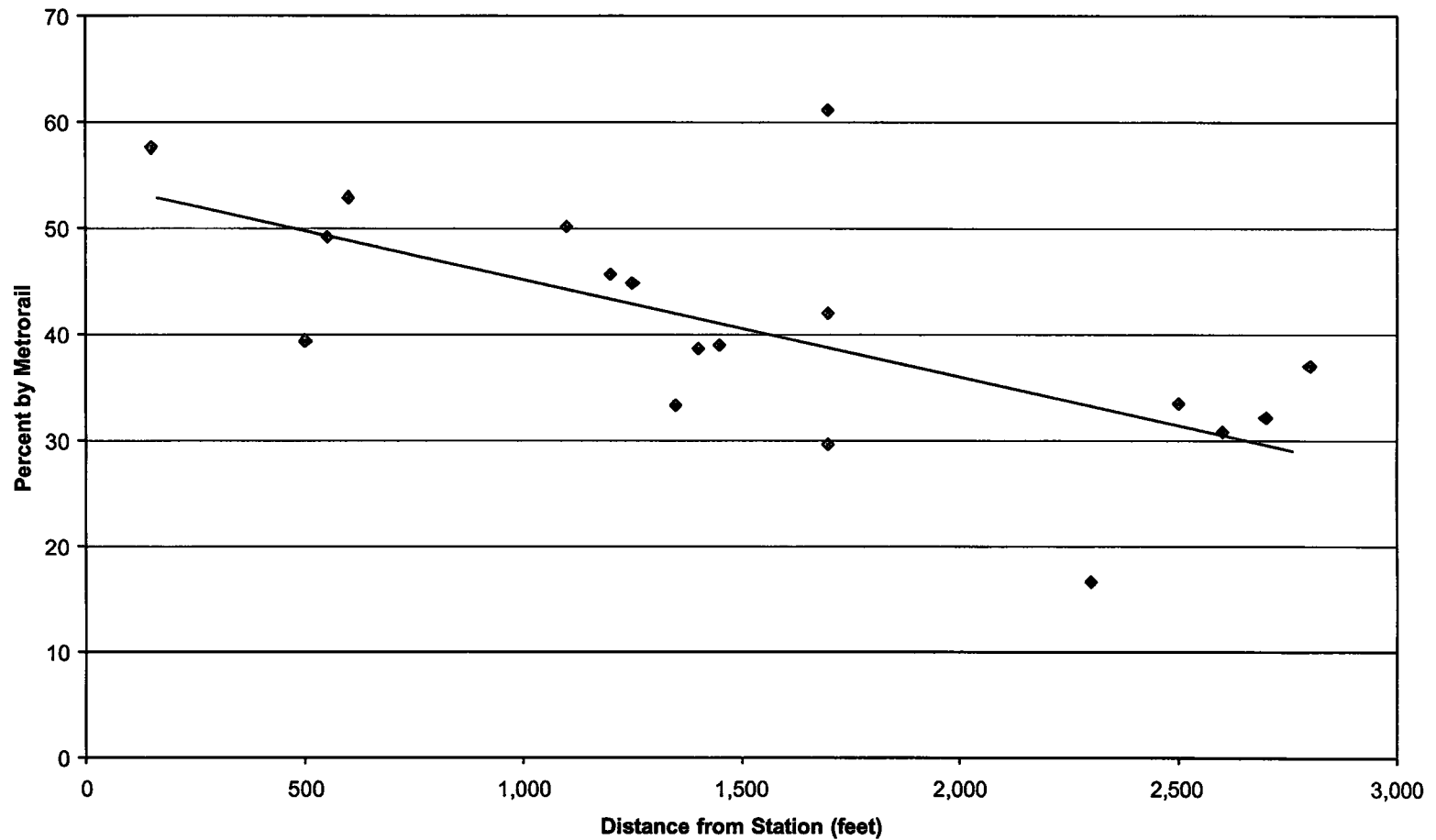
#### **4.2.2 Regression Analysis**

Independent variables similar to those used in the office site analysis were tested to determine if any explain the variation in modal split for trips made from the residential sites. After initial analysis using all sites, data from the two Gallery Place-Chinatown sites were removed from the equations as a sensitivity test as these sites produced very different mode share characteristics than the other residential sites (see Table 9).

Distance between site and station produced a stronger correlation with mode shares than that found for office sites (see Section 4.1.2). For Metrorail use, the R-square value was 0.41, and the correlation indicates that Metrorail use decreases by 0.87 percent for every 100 feet increase in distance a residential site is located from the station exit/entrance (see Figure 15). If only commute and school trips are counted, the R-square value for Metrorail trips drops to 0.23, but as noted above, the overall percent of trips made by Metrorail increases. Table 11 summarizes the predictive outcomes for all and commute/school residential Metrorail trips by distances of zero, 1/4 and 1/2 mile from a Metrorail station.



**Figure 15**  
**Residential Metrorail Usage for All Trips by Distance from Station**





**Table 11**  
**Regression Equation Summary for All Residential and Residential Commute/School**  
**Metrorail Trips by Distance from Station**

Distance (mile)	Metrorail Mode Share	
	Overall	Commute/School
0	54%	65%
1/4	43%	54%
1/2	31%	44%

Housing and street densities showed moderate correlations with auto and other transit (Metrobus and all other transit) modes, but the correlations were weaker when partnered with Metrorail use. As noted above, street density was used as a proxy for the attractiveness of the pedestrian environment. Higher street densities normally indicate good walking or pedestrian environments. The strongest correlation equation indicates that auto use decreases by 2.54 percent for every increase of one residential unit per acre, and decreases by 2.38 percent for every increase of one linear mile per square mile of street. The overall results among the housing and street densities suggest that residents living in areas with comparatively higher density housing and a dense street network are less likely to use their car, and more likely to use transit and Metrorail.

More detailed information about the regression analysis conducted for residential sites is provided in Appendix C.2.2.

#### **4.3 Retail, Hotel and Entertainment (Movie Theater) Sites**

The five retail sites are located at distances from Metrorail stations varying from zero to 1,700 feet, and almost 1,300 people were interviewed at these sites (see Table 12). The five hotels are located at distances from Metrorail stations varying from zero to 4,100 feet, and 167 guests and visitors were interviewed at these sites (see Table 13). The four entertainment (movie theater) sites are located at distances from Metrorail stations varying from 700 to 2,200 feet, and 974 moviegoers were interviewed at these sites (see Table 14).

##### **4.3.1 Frequency Analysis**

As shown in Table 15, an average of 29 percent of trips to and from retail sites used Metrorail, which was similar to the 36 and 27 percent rates for auto and walk /other modes, respectively. The deviation in Metrorail use ranged from a high of 44 percent on U Street to a low of nine percent at the Silver Spring Neighborhood Center.

An average of 30 percent of all trips to and from the hotels used Metrorail (see Table 15). Similar to the retail sites, the auto and walk/other modes were not much different at 31 and 34 percent, respectively.



**Table 12**  
**Characteristics of Surveyed Retail Sites**

Retail Site	Square Footage (by 1000 sq ft)	Distance from Station (ft)	Parking Spaces	Number of Interviews
<b>Ballston Station Area</b>				
Ballston Common	490	800	3,450	412
<b>Crystal City Station Area</b>				
Crystal Plaza Shops	108	1,200	1,963 <sup>1</sup>	229
The Underground	151	0	1,899 <sup>2</sup>	268
<b>Silver Spring Station Area</b>				
Silver Spring Neighborhood Center	N/A	1,700	--	184
<b>U Street/African American Civil War Memorial/Cardozo Station Area</b>				
U St Main Street	N/A	0	N/A	196

Notes: <sup>1</sup> Parking for the Crystal Plaza Shops is shared with other buildings in Crystal Plaza.

<sup>2</sup> Parking for The Underground is shared with other buildings in Crystal Square.

**Table 13**  
**Characteristics of Surveyed Hotel Sites**

Hotel Site	Hotel Rooms	Distance from Station (ft)	Parking Spaces	Number of Interviews
<b>Ballston Station Area</b>				
Holiday Inn Arlington	221	1,700	225	13
<b>Crystal City Station Area</b>				
Crystal Gateway Marriott	700	550 <sup>1</sup>	780	37
Crystal Hyatt Regency	685	4,100 <sup>2</sup>	750	27
<b>Friendship Heights Station Area</b>				
Embassy Suites Chevy Chase Pavilion	198	0	--	49
<b>Silver Spring Station Area</b>				
Holiday Inn Silver Spring	242	1,800	250	49

Notes: <sup>1</sup> Via tunnel under Jefferson Davis Highway.

<sup>2</sup> Part of the distance was measured via an indoor route, in this case, via underground corridors.

**Table 14**  
**Characteristics of Surveyed Entertainment (Movie Theater) Sites**

Movie Theater Site	Screens	Distance from Station (ft)	Parking Spaces	Number of Interviews
<b>Ballston Station Area</b>				
Regal Cinemas	12	800	3,450 <sup>1</sup>	55
<b>Eisenhower Station Area</b>				
AMC Hoffman Theaters	22	700	--	377
<b>Silver Spring Station Area</b>				
AFI Silver Theater	3	1400	--	91
The Majestic 20	20	2200	--	451

Notes: <sup>1</sup> Parking is shared with Ballston Common Mall.



**Table 15**  
**Mode Shares at Retail, Hotel and Entertainment Sites**

Site Name	Site Type	Mode			
		Metrorail <sup>1</sup>	Metrobus & Other Transit <sup>2</sup>	Auto <sup>3</sup>	Walk & Other <sup>4</sup>
Ballston Station Area					
Ballston Common	R	23%	7%	43%	27%
Holiday Inn Arlington	H	17%	0%	67%	17%
Regal Cinemas	E	35%	9%	39%	17%
Crystal City Station Area					
Crystal Plaza Shops	R	36%	5%	24%	36%
The Underground	R	31%	6%	27%	35%
Crystal Gateway Marriott	H	27%	7%	24%	42%
Crystal Hyatt Regency	H	48%	3%	21%	28%
Eisenhower Avenue Station Area					
AMC Hoffman Theaters	E	12%	1%	83%	4%
Friendship Heights Station Area					
Embassy Suites Chevy Chase Pavilion	H	33%	5%	25%	36%
Silver Spring Station Area					
Silver Spring Neighborhood Center	R	9%	10%	67%	14%
Holiday Inn Silver Spring	H	8%	4%	54%	33%
AFI Silver Theater	E	39%	2%	49%	10%
The Majestic 20	E	19%	13%	56%	13%
U Street/African American Civil War Memorial/Cardozo Station Area					
U St Main Street	R	44%	13%	19%	25%
Average Among Sites					
Retail Sites	R	29%	8%	36%	27%
Hotel Sites	H	27%	4%	38%	31%
Entertainment Sites	E	26%	6%	57%	11%

Notes: <sup>1</sup> Includes multimodal trips that may have involved auto or bus use in combination with Metrorail.

<sup>2</sup> Includes bus only trips, and commuter rail, such as MARC, VRE or Amtrak.

<sup>3</sup> Includes trips as driver and passenger of a private automobile.

<sup>4</sup> Includes cycling and any other form of transportation one may use.

R: Retail

H: Hotel

E: Entertainment (Movie Theater)

Among the entertainment (movie theater) sites, the Regal Cinemas and AFI Silver Theater drew the highest percentages of Metrorail riders (35 and 39 percent, respectively) (see Table 15). The AMC Hoffman, with its ample free parking and good highway access, had a much lower Metrorail use rate of only 12 percent.

More detailed information about the frequency analysis conducted for retail, hotel and entertainment (movie theater) sites can be found in Appendices C.1.3 through C.1.5.



#### **4.3.2 Regression Analysis**

As with the office and residential sites, the regression analysis conducted for the retail, hotel and entertainment sites tested the strength of the relationship between mode share and variables such as distance from the station, street densities, which served as a proxy for the pedestrian-friendliness of the walk environment, and area housing and job densities. Unlike the other two land uses, however, no sensitivity testing was conducted for these types of land uses because of the small survey samples for each type.

At retail sites, distance between site and station showed a correlation with mode choice. The R-square value indicates that Metrorail use decreases by 1.29 percent for every 100 feet increase in distance a retail site is located away from the station exit/entrance. At entertainment (movie theater) sites, job, housing and street densities showed a relationship with increased transit use. The correlation indicates that an increase of one job per acre increases the percentage of transit trips made to entertainment (movie theater) sites by 0.84 percent. For housing density, the analysis indicates that an increase of one residential unit per acre increases the percentage of transit trips made to movie theater sites by 5.30 percent. For street density, the analysis indicates that an increase of one linear mile per square mile of streets increases the percentage of transit trips made to movie theater sites by 3.59 percent. In other words, a more attractive walking environment promotes increased transit ridership for this land use. However, because sample sizes for these land use types are so small, further analysis should be conducted using a larger sample size.

More detailed information about the regression analyses conducted for retail, hotel and entertainment (movie theater) sites can be found in Appendices C.2.3 through C.2.5.



## 5. Conclusions & Policy Considerations

The 2005 Development Related Ridership Survey effort provides a starting point for renewed efforts to analyze the travel characteristics of development around Metrorail stations. Despite some challenges related to privacy and security, this latest study provides a useful update to the past work, confirming some historic findings and pointing to some new findings regarding transit ridership. However, study findings also bring to light some areas where the process and data could be improved, and raise some questions as to the considerations and implications of WMATA joint development opportunities. The most notable findings are summarized below.

### 5.1.1 General Observations

#### Distance

2005 survey results confirmed previous findings that the walking distance between a site and the Metrorail station affects transit ridership (see Table 16). In general, the closer a site is to the station, the greater likelihood those traveling to/from a site choose Metrorail as their travel mode. Based on the survey results, this relationship was stronger for residential sites than for office sites.

**Table 16**  
**Regression Equation Summary for Office Commute and**  
**Residential Trips by Distance from Station**

Distance (Mile)	Metrorail Mode share		All Transit <sup>1</sup> Mode Share		Auto Mode Share	
	Office Commute	Residential	Office Commute	Residential	Office Commute	Residential
0	35%	54%	46%	55%	48%	29%
¼	23%	43%	30%	45%	66%	41%
½	10%	31%	13%	36%	83%	54%

Notes: <sup>1</sup> Includes Metrorail, Metrobus, commuter rail and other transit options.

#### Land Use

In urban fringe or outlying locations, residential uses may be more reliable in boosting Metrorail ridership than office uses. Based on the results of the survey, outlying office sites tended to produce trips connected with areas outside the core, which typically are not well served by transit.

At the overall site level, survey results showed that high-density, mixed-use environments with good transit access generated higher shares of transit and walk trips –especially midday trips from and visitor trips to office sites, than those areas dominated by a single use.

Overall, when compared to the results of the 1989 Survey, the 2005 results suggest that land uses surrounding Metrorail stations are supporting higher transit use than in 1989 (see Table 17). In 1989, the transit mode share for office sites near rail stations ranged from a high of 50 percent at



a CBD location to a low of 8.5 percent at a Suburban-Outside the Beltway location, with an overall average of almost 18 percent. In 2005, the high in CBD locations was 76 percent and the low in a Suburban-Outside the Beltway location was 8 percent, for an overall average of 34 percent, a 93 percent change from 1989. For residential sites, transit shares appeared to have changed little (see Table 17). The 1989 residential high/low was 74 and 34 percent, respectively, with an overall average of 46 percent. In 2005, the high/low was 67 and 17 percent, respectively, with an overall average of 45 percent. However, the site with 17 percent transit share was in the process of being converted from rentals to condominiums, which may have skewed the survey results. The next lowest transit share was 32 percent. Nevertheless, for residential sites, the results between 1989 and 2005 appear similar.

**Table 17**  
**Comparison of Transit Share Results from 2005 & 1989 Surveys**

Land Use Type	Transit <sup>1</sup> Share Range		Transit Share Average		
	2005 Survey	1989 Survey	2005 Survey	1989 Survey	% Change
Office: Commute	8% - 76%	8% - 50%	34% (17)	17.6% (10)	93%
Residential	17% <sup>2</sup> - 67%	30% - 74%	45% (18)	46.2% (10)	-3% <sup>3</sup>
Retail	19% - 57%	34% - 56%	37% (5)	44.2% (8)	-16%
Hotel	12% - 51%	11% - 38%	31% (5)	25.2% (10)	23%
Entertainment	13% - 44%	N/A	32% (4)	N/A	N/A

Notes: <sup>1</sup> Transit mode share includes Metrorail, Metrobus and Other Transit.

<sup>2</sup> The 17% figure is from a site converting its apartments to condominiums, and is an outlier. The next lowest end of the range is 32%.

<sup>3</sup> This figure may be skewed due to the low transit ridership reported from a site (Grosvenor House Apartments) that was in the process of converting its rental apartments to condominiums.

### Transit Accessibility

Metrorail continues to remain competitive with the automobile in markets where it provides good access and service and has increased its mode share in the core since 1989. In each surveyed land use category, those trips recorded to or from the District, the jurisdiction with the greatest number of rail stations and a comprehensive bus network, showed the highest rates of Metrorail and transit use. Those sites within or closer to the District tended to have a higher percentage of overall trips connecting to the District. The 1989 survey found similar patterns, noting that “there is a strong propensity to take transit from either Maryland or Virginia to the District but transit mode share is much lower between Montgomery County and Fairfax County,” even though the data “indicate that there is considerable trip interchange between Montgomery County and Virginia.” In all likelihood, this finding reflects the level of transit availability and access in the studied areas. The District, with the greatest number of rail stations and a comprehensive bus network, provides its residents and workers alike with good transit access on the home and work end.



## Auto Environment

Office sites on the low end of the transit share scale in 2005 are located in areas with good auto access and ample parking. At the other end of the scale, survey results show that transit mode shares are higher at sites in the inner areas—areas where traffic congestion is high, highway access limited and parking is constrained. While many of the station areas surveyed in the 2005 effort have similar land use characteristics, specifically in terms of density and design, at some of these stations, the auto environment is more attractive, as there is convenient access from a major highway and ample and inexpensive parking. As the data suggest, though the density and design of station areas can make for an attractive environment, without a transportation management strategy specifically focused on transit, many will still drive to a station area.

### **5.1.2 Potential Study Improvements**

#### Increased Sample Size – Greater Statistical Significance

The findings from this study should help guide WMATA decision-making with respect to its joint development program and overall station-area planning. However, given that the unit of analysis for this study is at the site level, the survey sample size is admittedly small. Collecting more detailed data for station areas throughout the WMATA system could result in effective increases in the sample size and could create a more robust data set. In particular, a program focusing on federal sites might prove useful as the region supports an extensive federal workforce, but this study was unable to attract specific federal participation.

#### Weekend Data

Local jurisdictions already have suggested that having weekend ridership data would be useful. There has been a noticeable increase in transit ridership on weekends. Collecting weekend station area transit use data could help WMATA assess the implications of increased weekend service on operations and service planning, maintenance programs and capital spending.

#### Parking Pricing

Additionally, this effort was unable to adequately address the issue of parking pricing as it relates to workplace transit ridership in Metrorail station areas, as so many variables must be evaluated. For example, at the site level, each employer may have a different parking subsidy policy; at the station level, parking of varying price levels, availability and distance may be available to employees. Research focusing on this issue may also add to the tools at WMATA's disposal.

### **5.1.3 Questions Raised**

Finally, the current study findings raise questions for WMATA with respect to a number of interesting and potentially important policy matters. For example, WMATA has significant unused capacity on outbound railcars in the peak-period. The system as a whole would benefit from increased utilization of this essentially “free” capacity, and office uses at suburban stations could help achieve this goal. To that end, there may be public policy benefits to encouraging office development at suburban rail stations as a complement to residential development, striking a balance between uses. The question raised is, what steps must be taken to raise the transit mode

share for transit-proximate office space in suburban settings? More detailed survey information linked to site design and transit use characteristics of different office labor markets (e.g., federal, IT, financial services, biotechnology, back-office support, etc.) could help WMATA and others better understand the implications and opportunities presented by alternative development scenarios, and what steps could be taken to raise transit mode shares in suburban office settings.

Additionally, the 2005 Development Related Ridership Survey data continue to point to the question of how WMATA best meets the access needs of those residents who wish to use Metrorail but are located in outlying or low-density areas, while maximizing the use of its station areas. For example, can bus service improvements, car-sharing arrangements or bicycle facility enhancements offer alternatives to those who currently drive to a rail station, freeing up some demand for parking? Additional research could tease out the variety of reasons why some Metrorail riders drive to stations and begin to classify those reasons and address them through targeted planning efforts.



# **Appendix A**

## **Survey Site Selection Process**

## **Appendix A**

### **Survey Site Selection Process**

Selecting the survey sites involved a two-step process: first, selecting Metrorail station areas to study, and second, identifying survey site locations distributed throughout the station areas in a manner that would yield comparative results.

#### **A.1 Metrorail Station Selection**

The 2005 survey originally targeted about ten station areas. The 1989 study had surveyed 38 sites at 13 station locations and the 2005 project team planned to survey fewer station areas and more sites at each station. As sites near a given station could be expected to share similar access characteristics, the team was of the opinion that surveying more sites at a single station would allow comparisons among those buildings while holding access characteristics, such as the pedestrian environment, relatively constant. However, given subsequently refined criteria and the availability of sites to survey, the 2005 effort also selected 13 station areas to study—but secured participation from 49 sites in total.

The following criteria were used to screen out those stations that would not be good candidates for inclusion in the 2005 study:

- Stations located in the metropolitan core. Stations located in the metropolitan core were generally eliminated from consideration because future joint or other developments are anticipated to be located in core fringe, midpoint or outlying locations. However, in the final list (see Appendix A.2), two exceptions were made to this criterion.
- Stations with surrounding general land uses in early stages of development. If surrounding land uses were “early” in development (i.e., large undeveloped areas, or areas currently undergoing major construction, or areas of low density), these stations would not provide enough data for the study.
- Stations with surrounding land uses dominated by an unconventional or atypical single use. Examples of such stations include Arlington Cemetery and the Pentagon. Land uses at these stations would not represent the kind of development expected at other Metrorail stations.
- Stations with surrounding land uses dominated by low-density residences. Recent joint or similar developments tend to be mixed use (office, commercial and residential), office or high-density residences.

Using the above criteria, about 45 percent of the stations were eliminated from the potential pool of stations.

An important consideration in selecting from the remaining stations was the intensity of their transit-oriented development (TOD) attributes. There is no universally accepted definition of TOD, but WMATA defines it as:

Projects near transit stops which incorporate the following smart-growth principles: reduce automobile dependence; encourage high shares of pedestrian and bicycle access trips to



transit; help to foster safe station environments; enhance physical connections to transit stations from surrounding areas; and provide a vibrant mix of land-use activities.

A number of Metrorail station areas exhibit these qualities, and therefore, they were given strong consideration to be included in the survey. To help guide selection of the stations, the following principles were developed:

1. Generally, a variety of station types should be examined, including those with primarily commercial or residential uses, as well as those with a mix of uses.
2. The five land use types (office, residential, retail, hotel and entertainment) of the general densities desired (i.e., relatively high) should be generously represented among the selected stations.
3. The densities, mix, urban design and streetscape of land uses surrounding the station should be similar to expected future joint, private, or government developments near Metrorail stations. Application of this principle led to the exclusion of metropolitan core stations mainly because these examples are not likely to be replicated in upcoming developments.
4. The availability of data (i.e., high number of qualified buildings) at stations was a strong consideration because it was expected that many building owners or managers would decline the offer to participate, given the current security climate and related privacy concerns.
5. Some stations should be located in the eastern portion of the region to address issues raised in the Brookings Institution report, "A Region Divided," which reported that the eastern half of the region, with the dividing line at 16th Street, NW, carries "the area's burden of poverty and social distress while the western half enjoys most of the region's fruits of prosperity."
6. All five Metrorail lines should be represented among the selected stations.
7. All six political jurisdictions of the metropolitan area in which Metrorail stations are located (District of Columbia, Arlington County, Fairfax County, City of Alexandria, Montgomery County, and Prince George's County) should be represented among the selected stations.
8. Despite the desire to focus station-area selection on examples of TOD in fringe, midpoint or outlying locations, a small number of stations should be included in the survey for comparative purposes. At least one station should be located in the metropolitan core; at least one station should be located in a primarily residential area, with an adequate number of buildings to survey; and at least one station should be located in a suburban office environment, where parking is widely available, including at the station.
9. Stations included in the 1989 study also were given strong consideration by the project team so that comparisons could be made between past and current information.

Applying the above principles led the project team to propose the following eleven stations for the 2005 Development-Related Ridership Survey:

- Ballston (Orange line/Arlington County)
- Court House (Orange line/Arlington County)
- Crystal City (Yellow and Blue lines/Arlington County)
- Eisenhower Avenue (Yellow line/Alexandria)
- Farragut West (Orange and Blue lines/District of Columbia)

- Friendship Heights (Red line/District of Columbia and Montgomery County)
- Grosvenor-Strathmore (Red line/ Montgomery County)
- New Carrollton (Orange line/Prince George's County)
- Silver Spring (Red line/Montgomery County)
- U Street/African American Civil War Memorial/Cardozo (Green line/District of Columbia)
- Vienna/Fairfax-GMU (Orange line/Fairfax County)

The rationale for selecting these stations is provided below:

- The land uses surrounding the Ballston, Court House, Friendship Heights and Silver Spring stations exhibit many characteristics of desirable TOD at core fringe or midpoint Metrorail stations. These areas provide good pedestrian environments, a high mix of land uses, and higher densities that have led to relatively high Metrorail ridership.
- Although the Crystal City land use model is unlikely to be replicated in the future, the project team decided to include this station because of the high number of nearby buildings that could potentially be included in the survey. This station also was included in the 1989 survey.
- The land uses surrounding the Eisenhower Avenue station exhibit characteristics of desirable TOD at terminus or near-terminus Metrorail stations. In addition, this station has recently supported new developments, such as the relocated Patent and Trademark Office (PTO).
- Farragut West was originally screened from consideration because of its location in the metropolitan core. Nevertheless, this station was included for comparative purposes following Principle 8.
- Grosvenor-Strathmore originally was screened from consideration because its surrounding land uses are mostly residential. However, the project team decided to include this station for two reasons. First, it is possible that a station may be later developed in a predominantly medium- to high-density residential manner, like Grosvenor-Strathmore. Second, this station may be used for comparative purposes, as indicated in principle 8, to determine if this kind of land use pattern has an impact on ridership characteristics. This station also was surveyed in the 1989 study.
- The project team chose the New Carrollton station because it is predominantly commercial office with ample free parking, and is located on the eastern side of the region, therefore, meeting both Principles 8 and 5.
- U Street/African American Civil War Memorial/Cardozo station was selected as a Green Line station in the eastern portion of the region, to meet Principles 5 and 6, and also because it has the advantage of having several nearby residential buildings, an active commercial district, and a hospital, which offer the possibility of a rich data environment, as per Principle 4.
- Vienna/Fairfax-GMU is similar to Grosvenor-Strathmore in that its surrounding land uses are mostly residential. It was selected for comparative purposes, as indicated in Principle 8.

In evaluating the above stations with the selection guidance principles, the following conclusions can be made:

All five land use types are well represented among the eleven station areas.



Seven station areas exhibit TOD characteristics that are either desirable or likely to be replicated at other Metrorail stations: Ballston, Court House, Farragut West, Friendship Heights, Grosvenor-Strathmore, Silver Spring and U Street-Cardozo.

Many of the stations are surrounded by a large number of buildings that would qualify for surveying.

At least two stations, U St.-Cardozo and New Carrollton, are located in the eastern portion of the region.

All five Metrorail lines are represented among the identified stations.

All six political jurisdictions are represented among the stations.

Seven of the stations were included in the 1989 survey: Ballston, Court House, Crystal City, Farragut West, Friendship Heights, Grosvenor-Strathmore and Silver Spring.

The recommended list of stations was presented for comment to WMATA's Jurisdictional Coordinating Committee (JCC), which consists of members representing the local governments in the Washington Metropolitan Area Transit Authority Compact. The JCC review resulted in the following changes to the list of stations:

- The area surrounding King Street Station, part of Old Town, Alexandria, was suggested as a better example of TOD than the development around the Eisenhower Avenue Station, which is newer. The King Street Station area contains a number of commercial office and high-density residential buildings that could qualify for surveying.
- Fairfax County asked that Vienna Metrorail station not be included because the County was planning to conduct its own transportation survey of people living and working near this station. The Vienna Station, therefore, was replaced with the Dunn Loring-Merrifield Station, which also is located in Fairfax County along the Orange Line.

The station list was not finalized until the survey sites were secured as there was no way of knowing if building/site owners or managers would agree to participate in the study at the time the list of stations was being developed. The next section describes the process through which survey sites were identified and selected.

## **A.2 Survey Site Selection**

The project team used the following criteria to select survey sites, which are consistent with the selection criteria used in the 1989 study, and are designed to ensure adequate response rates.

- Sites shall be no more than ½ mile from the station
- Office: Minimum 100,000 square feet (mix of private and public)<sup>1</sup>
- Residence: Minimum 75 dwelling units
- Retail: Clearly identifiable retail location with a high likelihood that those surveyed would be shoppers
- Hotel: Minimum 200 rooms
- Entertainment: movie theaters with no minimum number of screens

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<sup>1</sup> Some exceptions had to be made in order not to duplicate annual commuter survey efforts underway in Montgomery County during the same time period.

In addition to the above criteria, the following principles were developed to guide decisions about the distribution and selection of survey buildings and sites for the study:

- Because joint development proposals tend to be weighted toward office and residential uses, higher numbers of these types of sites were selected at the expense of retail, hotel and entertainment sites.
- The entertainment category would consist only of movie theaters (including multiplexes), a common type of entertainment establishment often found near stations.
- The study should try to obtain an even distribution of public (federal, state, or local) and private office building sites.

With the JCC's assistance, the project team obtained candidate lists of buildings/sites. Local jurisdiction staff and other organizations, such as the U-Street Main Street Association and the Golden Triangle and Downtown Business Improvement Districts, also provided information to assist in the selection of candidate survey sites as well. Site managers were then contacted and asked if they would be willing to participate in the study. Some managers declined due to security or privacy concerns, or did not respond to numerous telephone calls and e-mails. Some of the office sites agreed to distribute workplace surveys but declined to allow the visitor intercept surveys to be conducted on their premises. Because the eleven initial stations could not supply the desired distribution of residential and entertainment (movie theater) sites, alternative sites were secured in the Gallery Place-Chinatown and Eisenhower Avenue Metrorail Station areas.

In the end, a total of 49 sites agreed to participate in the 2005 Development-Related Ridership Survey (see Chapter 2). These sites were distributed among 13 station areas. Figures 2 through 13 show the locations of these sites in relation to the stations.



### **A.3 Metrorail Station Area Profiles**

### Appendix A-3 Metrorail Station Area Profiles

Station	Metro Line(s)	Initial Selection Parameters																		
		Included in 1989 Study	Concentric Location			Metro Service Levels							Area Development Stage			General Land Use				
			Central Business District	Suburban-Inside the Beltway	Suburban-Outside the Beltway	Terminus/Near Terminus	Midpoint-Single Line	Midpoint-Double Lines	Midpoint-Junction	Core-Single Line	Core-Double Lines	Core-Junction	Early in development	Transitional area	Built-out area	Mostly Institutional/Single Use	Mostly residential	Mostly office/commercial	Mixed, heavy residential	Mixed, heavy office/commercial
Ballston-MU																				
Court House																				
Crystal City																				
Dunn Loring-Merrifield																				
Eisenhower Avenue																				
Farragut West																				
Friendship Heights																				
Gallery Place-Chinatown																				
Grosvenor-Strathmore																				
King Street																				
New Carrollton																				
Silver Spring																				
U St/African-Amer Civil War Mem'l																				



### Appendix A-3 Metrorail Station Area Profiles

Station	Walkable	Land Uses Found at Station Site					Additional Information	Activity Center Information <sup>1</sup>						Category or Typology	
		Residential	Office	Retail	Hotel	Entertainment		Year 2000			Proj'd (2025)			Activity Center	Typical/Desirable vs. Comparative
								Job Density	Household Density	Jobs/Household Ratio	Job Density	Household Density	Jobs/Household Ratio		
Ballston-MU							Ballston One (of)	84.5	26.5	3.2	140.6	35.5	4.0	Mixed use center	Typical/Desirable
							Randolph Towers (res)								
							Balston Common (ret)								
Court House								77.7	27.8	2.8	101.2	32.6	3.1	Mixed use center	Typical/Desirable
Crystal City							Crystal Square 2 (of)	96.1	11.9	8.1	140.1	18.8	7.5	Mixed use center	Comparative
							Crystal Square Apts. (res)								
							Crystal Plaza Apts. (res)								
							The Underground (ret)								
							Crystal Plaza Shops (ret)								
							Crystal Gateway (hot)								
							Crystal Hyatt (hot)								
Dunn Loring-Merrifield								26.5	1.6	16.6	37.3	2.6	14.6	Employment center	Typical/Desirable
Eisenhower Avenue								19.6	2.2	9.0	60.7	9.8	6.2	Mixed use center	Typical/Desirable
Farragut West							1701 Pennsylvania (of)	None/Not Applicable						DC core	Comparative
Friendship Heights								23.0	8.0	2.9	32.0	10.0	3.1	Mixed use center	Typical/Desirable
Gallery Place-Chinatown								None/Not Applicable						DC core	Typical/Desirable
Grosvenor-Strathmore							Grosvenor House Apts (res)	None/Not Applicable						None	Comparative
							Grosvenor Park I (res)								
							Stoneybrook (res)								
King Street								29.3	9.0	3.3	30.9	10.0	3.1	Mixed use center	Typical/Desirable
New Carrollton								16.5	3.3	5.0	17.3	3.3	5.2	Suburban employment	Comparative
Silver Spring							Silver Spring Metro Center (of)	83.1	13.6	6.1	107.6	22.8	4.7	Mixed use center	Typical/Desirable
							Twin Towers (res)								
							Georgian Towers (res)								
							Holiday Inn (hot)								
U St/African-Amer Civil War Mem'l								None/Not Applicable						DC core	Typical/Desirable

Note: <sup>1</sup> Information from Metropolitan Washington Regional Activity Centers: A Tool for Linking Land Use and Transportation Planning prepared by the Metropolitan Washington Council of Governments.

## **Appendix B**

### **Data Collection Process**



## **Appendix B**

### **Data Collection Process**

The sites listed in Appendix A.2 provide a representative sample of the universe of all similarly sized or similarly functional office, residential, retail, hotel and entertainment sites proximate to (i.e., comfortable walk distance) all Metrorail stations throughout the Washington metropolitan area, which probably number in the thousands. Unlike many transportation surveys where the unit of analysis is an individual person or vehicle, the units of this study involve the transportation decisions and habits of hundreds of people per unit. As such, this sample is too small to provide statistically significant results. Nevertheless, the collected data does provide a useful snapshot of the travel characteristics of land uses around transit stations.

Data about the travel characteristics of individuals who use (e.g., work, live, shop, etc.) the sites identified in Appendix A.2 were collected through a series of questionnaires conducted by self-administered survey forms and oral intercept interviews conducted at each site (see Appendices B.6 and B.7). Data collection for this study began on May 6, 2005, and ended on June 10, 2005. The self-administered surveys were directed at office employees and residents. The oral intercept surveys were directed at office building visitors, patrons and employees of the retail sites, and guests or patrons of hotel and entertainment sites. The specifics of the data collection program by land use type are provided below.

#### **B.1 Data Collection Methodologies**

##### **B.1.1 Office Sites**

Data collection at office sites was conducted through self-administered surveys distributed to every employee at the participating site, and intercept oral interviews with visitors to the site. The survey form and oral interview questionnaire are provided in Appendices B.6 and B.7. Four office sites participating in the workplace survey declined to participate in the visitor survey.

The workplace survey forms were distributed either by project personnel or by building management. For those sites where the forms were distributed by management, project personnel later returned to the site and retrieved unused survey forms so that a precise distribution count for each site could be calculated. Along with the survey forms, WMATA provided letters to building management and employers explaining how data collection would be conducted at the site, and to request participation (see Appendix B.8). Respondents were asked to deposit completed survey forms in drop boxes placed throughout the office site per management instructions or preferences. Office employees were given at least one week to fill out the questionnaires, but were granted deadline extensions on a case-by-case basis, often depending on whether management allowed the drop boxes to remain on the premises longer than one week.

To collect data from visitors, interviewers were stationed at strategic locations where they could intercept visitors as they entered the office building. In most cases the interviewers were allowed in the lobby and elevator bays where visitors enter the building. Only one site did not allow project staff to conduct interviews inside the building. The interviews were scheduled on a

Tuesday, Wednesday, or Thursday roughly between the hours of 8:00 a.m. and 5:00 p.m. Visitors who entered the office site were stopped by interviewers and asked to participate in an oral interview regarding their trip to the site. If the person stopped was an employee, no questions were asked. Interview staff also counted the total number of visitors who entered the site to compare with the total number of interviews conducted at the site.

### **B.1.2 Residential Sites**

Data collection at residential sites was conducted exclusively through self-administered surveys distributed to every unit of the site (see Appendix B.6).

The residential survey forms were distributed by project personnel or building management and by U.S. mail using WMATA envelopes. Completed survey forms were returned via postage paid mailers.

For those sites where the forms were distributed by management, precise numbers of forms matching the number of units at each particular site were given to management personnel for distribution. Project personnel later returned to the site to retrieve unused survey forms so that a precise distribution count for each site could be calculated. However, only one site (Grosvenor House Apartments) returned unused forms, suggesting that surveys were delivered to vacant units, which would cause an underestimation of survey response rates for the “drop off” sites.

For those sites where the forms were distributed by mail, WMATA monitored the returned undeliverable mail to determine the site’s distribution count. Along with the survey forms, WMATA also prepared and sent letters to building management explaining how data collection would be conducted at the site and to request their participation, as well as “Dear Resident” letters which management could post in common areas to alert residents to the process and explain the project rationale (see Appendix B.8). The residential survey form included a business reply mail address so that no postage would be required from respondents. Instructions for mailing back the survey were provided on the form.

### **B.1.3 Retail Sites**

Data collection at retail sites was conducted exclusively through intercept oral interviews of site patrons and employees using the questionnaire shown in Appendix B.7.

To collect data from retail site patrons and employees, interviewers were stationed at strategic locations within the retail site. Unlike the office visitor survey, the interview areas were not always located near entrances because some sites were open or the site had too many entrances for the interviewers to cover. In general, the interviewers were stationed in high pedestrian areas, and to minimize bias, not near an entrance to the retail site that favors one transportation mode over others. The interviews were scheduled on a Tuesday, Wednesday, or Thursday between the hours the establishment opened and closed. Interview staff also counted the number of people who passed through the interview areas to compare with the number of interviews conducted at the site.



#### **B.1.4 Hotel Sites**

Data collection at hotels was conducted exclusively through intercept oral interviews of guests and visitors using the questionnaire shown in Appendix B.7.

Interviewers were stationed at strategic locations within the hotel where guests and visitors enter or leave the site. All the hotels participating in the survey allowed interviewers to work in their lobbies. The interviews were scheduled on a Tuesday, Wednesday, or Thursday between the hours of 7:00 a.m. to 10:00 a.m.<sup>2</sup> These hours were selected as the time when most guests would depart the hotel for any number of reasons and when most visitors would enter the hotel for meetings or conferences. Hotel employees were not included in the survey. Interview staff also counted the total number of guests and visitors who entered or departed the site to compare with the number of interviews conducted at the site.

#### **B.1.5 Entertainment Sites**

As noted in Appendix A.2, entertainment sites were defined as movie theaters, including multiplexes. Data collection at movie theater sites was conducted exclusively through intercept oral interviews of moviegoers using the questionnaire shown in Appendix B.7.

Interviewers were stationed at locations where they could intercept moviegoers as they entered the site. In three of the four locations, interviewers were allowed to be in the lobby. Only one site did not allow interviewers to work within the lobby. The interviews were scheduled on a Tuesday, Wednesday, or Thursday between the hours the theater opened its doors for the first showing and just before the last showing began. The interviewers usually intercepted moviegoers during the period between waiting to buy their tickets, and handing their tickets to the usher. At the one site where the team was not allowed in the lobby, intercepts occurred before moviegoers entered the building. Interview staff also counted the total number of patrons who entered the site to compare with the number of interviews conducted at the site.

### **B.2 Statistical Reliability of Survey Results**

The travel data collected from surveyed respondents in the WMATA Development-Related Ridership Survey is based on a multiple level sampling design, comprised of selected stations, selected buildings, and sampled persons intercepted at these locations. Those individuals responding to the survey represent an approximate random sampling for which statistical estimates of sampling error can be made. Measures of travel rates at the station and development type summary level are essentially case study measures that represent estimates for those locations. The results at this level can not be generalized or attributed to a larger population of such sites in a meaningful statistical manner.

For an individual building, however, assuming that a random sample of building visitors, employees or residents were included in the survey, it is possible to estimate the range of reliability of the results as they pertain to characteristics of the entire population of persons associated with the site. For measures such as the share of trips made by transit, a proportional

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<sup>2</sup> The intercept survey at the Ballston Holiday Inn occurred between the hours of 9 am and 11 am.

or percentage type measure, the binomial sample theorem applies and the confidence limits, at a given level of significance (e.g. 95 percent) can be computed based on the actual number of persons or trips used and the observed share as a plus or minus and percentage point range around the sample statistic.

These confidence limit ranges are shown in Table B-1 for varying sample sizes and for a range of proportional results. For example, if in a sample segment of 150 work trips and 45 (or 30 percent) reported using Metrorail, the estimated share for the all work trips at the site would be +/- 7.3 percent, or between 22.7 percent and 37.3 percent at a 95 percent level of reliability.

**Table B-1**  
**Confidence Limits (+/- % points) for Proportional Measure -**  
**at the 95% Significance Level**

Sample Size	Observed Percentage from Sample (Segment)									
	1% or 99%	2% or 98%	3% or 97%	5% or 95%	10% or 90%	15% or 85%	20% or 80%	30% or 70%	40% or 60%	50% or 50%
10	n/a	n/a	n/a	n/a	18.6%	22.1%	24.8%	28.4%	30.4%	31.0%
25	n/a	n/a	6.7%	8.5%	11.8%	14.0%	15.7%	18.0%	19.2%	19.6%
50	n/a	3.9%	4.7%	6.0%	8.3%	9.9%	11.1%	12.7%	13.6%	13.9%
75	n/a	3.2%	3.9%	4.9%	6.8%	8.1%	9.1%	10.4%	11.1%	11.3%
100	2.0%	2.7%	3.3%	4.3%	5.9%	7.0%	7.8%	9.0%	9.6%	9.8%
150	1.6%	2.2%	2.7%	3.5%	4.8%	5.7%	6.4%	7.3%	7.8%	8.0%
200	1.4%	1.9%	2.4%	3.0%	4.2%	4.9%	5.5%	6.4%	6.8%	6.9%
300	1.1%	1.6%	1.9%	2.5%	3.4%	4.0%	4.5%	5.2%	5.5%	5.7%
400	1.0%	1.4%	1.7%	2.1%	2.9%	3.5%	3.9%	4.5%	4.8%	4.9%
500	0.9%	1.2%	1.5%	1.9%	2.6%	3.1%	3.5%	4.0%	4.3%	4.4%
600	0.8%	1.1%	1.4%	1.7%	2.4%	2.9%	3.2%	3.7%	3.9%	4.0%
700	0.7%	1.0%	1.3%	1.6%	2.2%	2.6%	3.0%	3.4%	3.6%	3.7%
800	0.7%	1.0%	1.2%	1.5%	2.1%	2.5%	2.8%	3.2%	3.4%	3.5%
900	0.7%	0.9%	1.1%	1.4%	2.0%	2.3%	2.6%	3.0%	3.2%	3.3%
1000	0.6%	0.9%	1.1%	1.4%	1.9%	2.2%	2.5%	2.8%	3.0%	3.1%
2000	0.4%	0.6%	0.7%	1.0%	1.3%	1.6%	1.8%	2.0%	2.1%	2.2%
3000	0.4%	0.5%	0.6%	0.8%	1.1%	1.3%	1.4%	1.6%	1.8%	1.8%



## **Appendix B.3**

### **Acknowledgements**

WMATA wishes to acknowledge the following individuals for their assistance in making the survey a success:

- **Ballston Metro Station**
  - Ballston One: Ken Rosenbuger
  - 3 Ballston Plaza: Judy Agee
  - Ballston Common and Regal Cinemas: Stephanie Shriver-Engdahl and Selina Tolentina
- **Court House Station**
  - 2100 & 2200 Clarendon Blvd.: Deidre Schexnayder and Jeff Price
  - Courthouse Tower: Lisa Cunniff
- **Crystal City Station**
  - Crystal Park Four: Deidre Schexnayder and Doug Forrester
  - Crystal Square 2: Deidre Schexnayder and Doug Wright
  - Crystal Square Apartments: Sabrina Woods
  - Crystal Plaza Shops and Crystal City Shops North (Underground): Brenda Davis
- **Dunn-Loring-Merrifield**
  - Merrifield Village: Loretta Horn
- **Farragut West Station**
  - 1701 Pennsylvania Ave.: Karla Christensen
  - 1634 I Street: Ellen De Bremond and Pete Kossiaras
- **Friendship Heights**
  - 2 Wisconsin Circle: Leslie Olson
  - Chevy Chase Plaza: Nancy Stoner
  - North Park Apartments: Kim Luk
  - Embassy Suites Chevy Chase Pavilion: Jeff Brainerd
- **Gallery Place/Chinatown**
  - The Lansburgh: Kevin Wilsey and Patty BremPELL
- **Grosvenor-Strathmore**
  - Avalon Bay: Michael Mathis
  - Grosvenor House Apartments: Debra Murray
  - Grosvenor Park I: Vicki Meyer
  - Stoneybrook: Kay Gottesman and Lenore Sack
- **King Street**
  - King Street Station: Stephen Fenning and Dan Diaz
  - 333 John Carlyle: Carol Goodart
- **New Carrollton**
  - 8400 Corporate Drive: Sherri Washington and Steve Brown

- Silver Spring
  - 8380 Colesville Road: Chris Healy and Gina Yates
  - 8720 Georgia Avenue: Michael Federici and Donna Cellini
  - Metro Plaza 1: Genny Hardesty
  - Georgian Towers: Alex Hekimian and Brian Beard
  - Twin Towers: Will Kaine
  - Silver Spring Neighborhood Center: Rob Parker
  - Holiday Inn Silver Spring: Sammy Bazuzi and Brooke Ratley
  - AFI Silver Theater: Lori Sousa
  - The Majestic 20 (Consolidated Theaters): David Kussner
- U Street/African American Civil War Memorial/Cardozo Station
  - Reeves Center: James Isley and Deneane Bell
  - U Street Main Street: Nevin Kelly



## **B.4 Self-Administered Survey Forms**



## Washington Metropolitan Area Workplace Survey

This survey is part of a continuing effort of the Washington Metropolitan Area Transit Authority (Metro) to plan for the transportation needs of residents and workers within the Washington region. We would appreciate your help by filling out this questionnaire. Any information you provide will be completely confidential, and will only be reported in summary form.

Please return this survey to the drop box designated for your office.

If you have any questions, please contact Jason Yazawa of Parsons Brinckerhoff at 703-742-5820.

**THANK YOU FOR YOUR ASSISTANCE!**

<b>1. Today's Date:</b> _____/2005													
<b>2. What is the address of the place where your report for work?</b> _____ _____													
<b>3. Which of the following best describe your job? (Please Check One Box)</b> <table border="0"><tr><td><input type="checkbox"/> Professional</td><td><input type="checkbox"/> Technician</td><td><input type="checkbox"/> Laborer</td></tr><tr><td><input type="checkbox"/> Executive/Managerial</td><td><input type="checkbox"/> Craftsman, mechanic, etc.</td><td><input type="checkbox"/> Service worker</td></tr><tr><td><input type="checkbox"/> Administrative/Clerical</td><td><input type="checkbox"/> Driver</td><td><input type="checkbox"/> Military</td></tr><tr><td><input type="checkbox"/> Sales</td><td><input type="checkbox"/> Equipment operator</td><td><input type="checkbox"/> Other</td></tr></table>		<input type="checkbox"/> Professional	<input type="checkbox"/> Technician	<input type="checkbox"/> Laborer	<input type="checkbox"/> Executive/Managerial	<input type="checkbox"/> Craftsman, mechanic, etc.	<input type="checkbox"/> Service worker	<input type="checkbox"/> Administrative/Clerical	<input type="checkbox"/> Driver	<input type="checkbox"/> Military	<input type="checkbox"/> Sales	<input type="checkbox"/> Equipment operator	<input type="checkbox"/> Other
<input type="checkbox"/> Professional	<input type="checkbox"/> Technician	<input type="checkbox"/> Laborer											
<input type="checkbox"/> Executive/Managerial	<input type="checkbox"/> Craftsman, mechanic, etc.	<input type="checkbox"/> Service worker											
<input type="checkbox"/> Administrative/Clerical	<input type="checkbox"/> Driver	<input type="checkbox"/> Military											
<input type="checkbox"/> Sales	<input type="checkbox"/> Equipment operator	<input type="checkbox"/> Other											
<b>4. Do you work full-time or part-time?</b> <input type="checkbox"/> Full-time <input type="checkbox"/> Part-time													
<b>5. At what time did you START work TODAY, even if atypical?</b> _____	<b>6. At what time did (or will) you LEAVE work TODAY, even if atypical?</b> _____												
<b>7. How did you get to work TODAY? (Please Check One Box)</b> <table border="0"><tr><td><input type="checkbox"/> Auto: Drove</td><td><input type="checkbox"/> Bus or Shuttle Only – <i>Please continue at Question 9</i></td></tr><tr><td><input type="checkbox"/> Auto: Passenger – <i>Please continue at Question 10</i></td><td><input type="checkbox"/> MARC, VRE or Amtrak – <i>Please continue at Question 9</i></td></tr><tr><td><input type="checkbox"/> Auto: Drop-off – <i>Please continue at Question 10</i></td><td><input type="checkbox"/> Walk all the way – <i>Please continue at Question 10</i></td></tr><tr><td><input type="checkbox"/> Rode Metrorail then Walked or Biked – <i>Please continue at Question 9</i></td><td><input type="checkbox"/> Bicycle all the way – <i>Please continue at Question 10</i></td></tr><tr><td><input type="checkbox"/> Rode Metrorail then Rode Bus or Shuttle – <i>Please Continue at Question 9</i></td><td><input type="checkbox"/> Other – <i>Please continue at Question 10</i></td></tr></table>		<input type="checkbox"/> Auto: Drove	<input type="checkbox"/> Bus or Shuttle Only – <i>Please continue at Question 9</i>	<input type="checkbox"/> Auto: Passenger – <i>Please continue at Question 10</i>	<input type="checkbox"/> MARC, VRE or Amtrak – <i>Please continue at Question 9</i>	<input type="checkbox"/> Auto: Drop-off – <i>Please continue at Question 10</i>	<input type="checkbox"/> Walk all the way – <i>Please continue at Question 10</i>	<input type="checkbox"/> Rode Metrorail then Walked or Biked – <i>Please continue at Question 9</i>	<input type="checkbox"/> Bicycle all the way – <i>Please continue at Question 10</i>	<input type="checkbox"/> Rode Metrorail then Rode Bus or Shuttle – <i>Please Continue at Question 9</i>	<input type="checkbox"/> Other – <i>Please continue at Question 10</i>		
<input type="checkbox"/> Auto: Drove	<input type="checkbox"/> Bus or Shuttle Only – <i>Please continue at Question 9</i>												
<input type="checkbox"/> Auto: Passenger – <i>Please continue at Question 10</i>	<input type="checkbox"/> MARC, VRE or Amtrak – <i>Please continue at Question 9</i>												
<input type="checkbox"/> Auto: Drop-off – <i>Please continue at Question 10</i>	<input type="checkbox"/> Walk all the way – <i>Please continue at Question 10</i>												
<input type="checkbox"/> Rode Metrorail then Walked or Biked – <i>Please continue at Question 9</i>	<input type="checkbox"/> Bicycle all the way – <i>Please continue at Question 10</i>												
<input type="checkbox"/> Rode Metrorail then Rode Bus or Shuttle – <i>Please Continue at Question 9</i>	<input type="checkbox"/> Other – <i>Please continue at Question 10</i>												
<b>8. PLEASE ANSWER QUESTIONS 8A TO 8E IF YOU DROVE TO WORK TODAY.</b>													
<b>8A. Do you normally drive to work?</b>  <input type="checkbox"/> Yes <input type="checkbox"/> No	<b>8B. Are there convenient transit (Metrorail and bus) options available for your trip to work?</b>  <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't Know												



<b>8C. Does your employer (May Select More Than One or None at All):</b>	
<input type="checkbox"/> Provide free or subsidize your parking costs? <input type="checkbox"/> Participate in government programs that subsidize parking costs? <input type="checkbox"/> Subsidize your automobile expenses? <input type="checkbox"/> Provide a car for business purposes during the day?	<input type="checkbox"/> Have a program to encourage car or vanpooling? <input type="checkbox"/> Allow flexible working hours? <input type="checkbox"/> Allow full or partial telecommuting? <input type="checkbox"/> Other arrangements, please specify: _____
<b>8D. Do you pay for parking at or near your workplace?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No	<b>8E. If "yes", how much do you pay for parking?</b> _____/day or _____/month
<b>9. PLEASE ANSWER QUESTIONS 9A TO 9F IF YOU USED TRANSIT TO COME TO WORK.</b>	
<b>9A. Do you normally ride transit?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No	<b>9B. Was a privately owned vehicle available for your trip to work TODAY?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No
<b>9C. How would you best describe the walk from the last transit vehicle (e.g., Metrorail station or bus stop) to the building or location where you work? (Please Check One Box)</b> <input type="checkbox"/> Short and pleasant <input type="checkbox"/> Long and pleasant <input type="checkbox"/> Neutral, don't know or no opinion <input type="checkbox"/> Short and unpleasant <input type="checkbox"/> Long and unpleasant	
<b>9D. What would make the walk between your Metrorail station or bus stop to your work place more enjoyable? (May Select More Than One)</b> <div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"> <input type="checkbox"/> Nothing  <input type="checkbox"/> Provide sidewalks or pedestrian walkways  <input type="checkbox"/> Wider sidewalks  <input type="checkbox"/> More shade trees  <input type="checkbox"/> Pedestrian bridge(s) over busy streets         </div> <div style="width: 50%;"> <input type="checkbox"/> Favorable pedestrian walk signals  <input type="checkbox"/> Alternative pedestrian routes available  <input type="checkbox"/> More retail stores and eating places along route  <input type="checkbox"/> Other, please specify _____         </div> </div>	
<b>9E. Does your employer (May Select More Than One or None at All):</b>	
<input type="checkbox"/> Pay for or subsidize your transit costs? <input type="checkbox"/> Participate in government programs that subsidize transit costs? <input type="checkbox"/> Provide a car for business purposes during the day? <input type="checkbox"/> Have a program to encourage car or vanpooling?	<input type="checkbox"/> Allow flexible working hours? <input type="checkbox"/> Allow full or partial telecommuting? <input type="checkbox"/> Other arrangements, please specify _____
<b>9F. What is your out-of-pocket round-trip daily cost to and from work? (Please include all transit fares and parking charges)</b> _____	

<b>10. If you made or plan to make one or more trips from and returning to your place of work TODAY, please check the appropriate boxes (DO NOT INCLUDE TRIPS TO AND FROM YOUR HOME):</b>			
	<b>Trip 1</b>	<b>Trip 2</b>	<b>Trip 3</b>
<b>10A. Main purpose of each trip (Please Check One Box Per Column)</b>			
Work related	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Errands or personal business	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Meal or snacks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shopping	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Educational	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Recreational	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>10B. In what city or county is the destination located for each trip? (Please Check One Box Per Column)</b>			
Within ½ mile from work place	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
District of Columbia	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Arlington County	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
City of Alexandria	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
City of Falls Church	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fairfax County	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fairfax City	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Prince George's County	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Montgomery County	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Elsewhere in Virginia	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Elsewhere in Maryland	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>10C. What is the zip code of the destination if you know it?</b>			
<b>10D. What is the nearest intersection of the destination if you know it?</b>			
<b>10E. Means of travel for each trip (Please Check One Box Per Column)</b>			
Drove all the Way	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Auto Passenger or Drop-Off	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Walk or Bike to Metrorail	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Drove, Parked and Rode Metrorail	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Auto Drop-off and Rode Metrorail	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bus or Shuttle to Metrorail	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bus or Shuttle Only	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MARC, VRE or Amtrak	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Walked all the Way	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bicycle all the Way	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<b>11. In what city or county is your residence located? (Please Check One Box)</b>		
<input type="checkbox"/> District of Columbia <input type="checkbox"/> Arlington County <input type="checkbox"/> City of Alexandria <input type="checkbox"/> City of Falls Church	<input type="checkbox"/> Fairfax County <input type="checkbox"/> Fairfax City <input type="checkbox"/> Prince George's County	<input type="checkbox"/> Montgomery County <input type="checkbox"/> Elsewhere in Virginia <input type="checkbox"/> Elsewhere in Maryland
<b>11A. What is address of or the intersection nearest to where you live?</b> <div style="border-bottom: 1px solid black; height: 15px; width: 100%; margin-top: 5px;"></div> <div style="border-bottom: 1px solid black; height: 15px; width: 100%; margin-top: 5px;"></div>		
<b>12. What is your age? (Please Check One Box)</b>	<b>13. What is your gender?</b>	
<input type="checkbox"/> 18 years or under <input type="checkbox"/> 45 to 54 <input type="checkbox"/> 19 to 24 <input type="checkbox"/> 55 to 64 <input type="checkbox"/> 25 to 34 <input type="checkbox"/> 65 years or over <input type="checkbox"/> 35 to 44	<input type="checkbox"/> Male <input type="checkbox"/> Female	
	<b>14. Are you a licensed driver?</b>	
	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>15. How many autos, pickups, SUVs, vans, and motorcycles are available for use by members of your household? (Please Check One Box)</b>		
<input type="checkbox"/> None <input type="checkbox"/> Two <input type="checkbox"/> Four or more <input type="checkbox"/> One <input type="checkbox"/> Three		

**THANK YOU FOR YOUR ASSISTANCE!**





## Washington Metropolitan Area Residential Survey

This survey is part of a continuing effort of the Washington Metropolitan Area Transit Authority (Metro) to plan for the transportation needs of residents and workers within the Washington region. We would appreciate your help by filling out this questionnaire about your household's travel patterns for any given **weekday**. Please do not provide information on travel patterns by you and others in your household for any weekend date. Any information you provide will be completely confidential, and will only be reported in summary form.

Please return this survey by **May 25, 2005** by dropping it off in any mailbox (**NO POSTAGE REQUIRED**). The return mailing label is provided on the last page of this questionnaire. When you have completed this survey, please fold the document in thirds, leaving the mailing label exposed, and seal or staple the document closed.

If you have any questions, please contact Jason Yazawa of Parsons Brinckerhoff at 703-742-5820.

### THANK YOU FOR YOUR ASSISTANCE!

<b>1. How many autos, pickups, SUVs, vans, and motorcycles are available for use by members of your household? (Please Check One Box)</b>  <input type="checkbox"/> None <input type="checkbox"/> Three <input type="checkbox"/> One <input type="checkbox"/> Four or more <input type="checkbox"/> Two	<b>2. How many designated parking spaces are provided or allotted to your residence? (Please Check One Box)</b>  <input type="checkbox"/> None <input type="checkbox"/> Two <input type="checkbox"/> One <input type="checkbox"/> Three or more			
<b>Please fill out the following information for persons 16 years of age or older (up to three people), including yourself, who currently live in the household. One person should fill in the responses. You would be the subject of the first set of questions. THE INFORMATION WOULD BE FOR ONE DAY ONLY. If you do not know how to answer the questions for others in your household, you may ask them for help in filling in the responses. If they are not available, you may leave those questions blank.</b>				
<b>3. Date on which travel occurred or will occur (PLEASE USE WEEKDAY):</b> _____/2005				
<b>Yourself (Person 1) – Questions 4 thru 6E</b>				
<b>4. Are you a licensed driver?</b>  <input type="checkbox"/> Yes <input type="checkbox"/> No	<b>5. Do you work or go to school outside your residence?</b>  <input type="checkbox"/> Yes <input type="checkbox"/> No			
<b>6. Please tell us about the trips (up to 4) you made or plan to make FROM YOUR HOME on ONE WEEKDAY.</b>				
	<b>Trip 1</b>	<b>Trip 2</b>	<b>Trip 3</b>	<b>Trip 4</b>
<b>6A. MAIN PURPOSE OF EACH TRIP (Please Check One Box Per Column)</b>				
Work or school	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Errands or personal business	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Meal or snacks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shopping	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Recreation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Social	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Trip 1	Trip 2	Trip 3	Trip 4
<b>6B. AT WHAT TIME DID YOU LEAVE OR PLAN TO LEAVE YOUR HOME FOR EACH TRIP?</b>				
<b>6C. IN WHAT CITY OR COUNTY IS THE DESTINATION LOCATED FOR EACH TRIP?</b> (Please Check One Box Per Column)				
District of Columbia	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Arlington County	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
City of Alexandria	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
City of Falls Church	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fairfax County	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fairfax City	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Prince George's County	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Montgomery County	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Elsewhere in Virginia	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Elsewhere in Maryland	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>6D. WHAT IS THE ADDRESS OR NEAREST INTERSECTION OF THE DESTINATION OF EACH TRIP IF YOU KNOW IT?</b>				
<b>6E. MEANS OF TRAVEL FOR EACH TRIP (Please Check One Box Per Column)</b>				
Drove all the Way	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Auto Passenger or Drop-Off	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Walk or Bike to Metrorail	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Drove, Parked and Rode Metrorail	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Auto Drop-off and Rode Metrorail	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bus or Shuttle to Metrorail	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bus or Shuttle Only	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MARC, VRE or Amtrak	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Walked all the Way	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bicycle all the Way	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Person 2 – Questions 7 thru 9E</b>				
<b>7. Is this person a licensed driver?</b>  <input type="checkbox"/> Yes <input type="checkbox"/> No		<b>8. Does this person work or go to school outside your residence?</b>  <input type="checkbox"/> Yes <input type="checkbox"/> No		
<b>9. Please tell us about the trips (up to 4) this person made or plans to make FROM YOUR HOME on the SAME DAY reported in Questions 6A thru 6E. If this person made trips with you or others in your household, please count these separately. For example, if you and this person were on a trip together, this trip should be recorded in both Questions 6A thru 6E, and Questions 9A thru 9E.</b>				

	Trip 1	Trip 2	Trip 3	Trip 4
<b>9A. MAIN PURPOSE OF EACH TRIP (Please Check One Box Per Column)</b>				
Work or school	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Errands or personal business	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Meal or snacks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shopping	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Recreation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Social	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>9B. AT WHAT TIME DID THIS PERSON LEAVE OR PLAN TO LEAVE YOUR HOME FOR EACH TRIP?</b>				
<b>9C. IN WHAT CITY OR COUNTY IS THE DESTINATION LOCATED FOR EACH TRIP? (Please Check One Box Per Column)</b>				
District of Columbia	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Arlington County	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
City of Alexandria	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
City of Falls Church	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fairfax County	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fairfax City	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Prince George's County	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Montgomery County	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Elsewhere in Virginia	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Elsewhere in Maryland	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>9D. WHAT IS THE ADDRESS OR NEAREST INTERSECTION OF THE DESTINATION OF EACH TRIP IF YOU KNOW IT?</b>				
<b>9E. MEANS OF TRAVEL FOR EACH TRIP (Please Check One Box Per Column)</b>				
Drove all the Way	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Passenger or Drop-Off	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Walk or Bike to Metrorail	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Drove, Parked and Rode Metrorail	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Drop-off and Rode Metrorail	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bus or Shuttle to Metrorail	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bus or Shuttle Only	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MARC, VRE or Amtrak	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Walked all the Way	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bicycle all the Way	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Person 3 – Questions 10 thru 12E</b>				
<b>10. Is this person a licensed driver?</b>		<b>11. Does this person work or go to school outside your residence?</b>		
<input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Yes <input type="checkbox"/> No		



**12. Please tell us about the trips (up to 4) this person made or plans to make FROM YOUR HOME on the SAME DAY reported in Questions 6A thru 6E. If this person made trips with you or others in your household, please count these separately. For example, if you and this person were on a trip together, this trip should be recorded in both Questions 6A thru 6E, and Questions 12A thru 12E.**

	Trip 1	Trip 2	Trip 3	Trip 4
<b>12A. MAIN PURPOSE OF EACH TRIP (Please Check One Box Per Column)</b>				
Work or school	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Errands or personal business	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Meal or snacks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shopping	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Recreation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Social	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>12B. AT WHAT TIME DID THIS PERSON LEAVE OR PLAN TO LEAVE YOUR HOME FOR EACH TRIP?</b>				
<b>12C. IN WHAT CITY OR COUNTY IS THE DESTINATION LOCATED FOR EACH TRIP? (Please Check One Box Per Column)</b>				
District of Columbia	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Arlington County	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
City of Alexandria	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
City of Falls Church	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fairfax County	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fairfax City	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Prince George's County	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Montgomery County	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Elsewhere in Virginia	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Elsewhere in Maryland	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>12D. WHAT IS THE ADDRESS OR NEAREST INTERSECTION OF THE DESTINATION OF EACH TRIP IF YOU KNOW IT?</b>				
<b>12E. MEANS OF TRAVEL FOR EACH TRIP (Please Check One Box Per Column)</b>				
Drove all the Way	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Passenger or Drop-Off	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Walk or Bike to Metrorail	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Drove, Parked and Rode Metrorail	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Drop-off and Rode Metrorail	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bus or Shuttle to Metrorail	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bus or Shuttle Only	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MARC, VRE or Amtrak	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Walked all the Way	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bicycle all the Way	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**THANK YOU FOR YOUR ASSISTANCE!**

## **B.5 Oral Interview Intercept Questionnaires and Recording Sheets**

## Office Visitor Intercept Questionnaire

INTERVIEWER TO RECORD ARRIVAL TIME.

**“Excuse me. Metro is conducting a travel survey. This survey is for visitors of this building.”**

1. **“Do you work in this building?”**

1. Yes
2. No

IF THE ANSWER IS “YES”: **“Thank you very much.”**

IF THE ANSWER IS “NO”: **“Could I ask you a few questions? OPTIONAL, IF NECESSARY: It should only take a few moments, and your responses will be confidential.”**

2. **“Why did you come here today?”**

- |   |                                       |
|---|---------------------------------------|
| 1. Visiting somebody who works in the building. | 4. Banking                            |
| 2. Deliveries                                   | 5. Shopping                           |
| 3. Eating                                       | 6. Medical, dental or social services |
|   | 7. Other                              |

3. **“How did you get here?”**

- |                              |                        |
|------------------------------|------------------------|
| 1. Auto: Drove               | 7. MARC, VRE or Amtrak |
| 2. Auto: Passenger           | 8. Walk                |
| 3. Auto: Drop-off            | 9. Bicycle             |
| 4. Metrorail and Walk/Bike   | 10. Taxi               |
| 5. Metrorail and Bus/Shuttle | 11. Other              |
| 6. Bus/Shuttle Only          |                        |

4. **ONLY FOR METRORAIL AND BUS USERS (#4, #5 AND #6 ABOVE): “Did you have a car available for your trip here?”**

1. Yes
2. No

5. **IF PERSON IS BY THEMSELVES: “Did you come here by yourself?” If YES, RECORD “ONE” BELOW. IF ANSWER IS NO, ASK THE FOLLOWING, AND ASK THE FOLLOWING IF THE PERSON IS WITH A GROUP (TWO OR MORE): “How many people came in your group, including yourself?”**

- |        |                 |
|--------|-----------------|
| 1. One | 3. Three        |
| 2. Two | 4. Four or more |

6. **“What kind of place did you come from prior to coming here?”**

- |                     |   |
|---------------------|---|
| 1. Home             | 5. Commercial establishment<br>(restaurant, retail store, etc.) |
| 2. Work place       |   |
| 3. School / college | 6. Other  |
| 4. Other office     |   |



**6A. "In what city or county is that place located?"**

- |                         |                           |
|-------------------------|---------------------------|
| 1. District of Columbia | 7. Prince George's County |
| 2. Arlington County     | 8. Montgomery County      |
| 3. City of Alexandria   | 9. Elsewhere in Virginia  |
| 4. City of Falls Church | 10. Elsewhere in Maryland |
| 5. Fairfax County       | 11. Other                 |
| 6. Fairfax City         |                           |

**6B. "What is the address of or the intersection nearest to that place?" NOT A PROBLEM IF PERSON DOES NOT KNOW OR REFUSES TO ANSWER**

**7. "How long do you expect to be here?" INTERVIEWER TO RECORD TIME**

**8. "Where will you go after leaving here?"**

1. Same place as before – GO TO QUESTION 9
2. Other place - IF OTHER PLACE –ASK AND RECORD FOR QUESTIONS 8A THRU 8C

**8A. ASK THIS QUESTION IF THE ANSWER GIVEN IN QUESTION 8 IS "OTHER PLACE", AND IS NOT OBVIOUS: "What kind of place is that?"**

- |                     |   |
|---------------------|---|
| 1. Home             | 5. Commercial establishment<br>(restaurant, retail store, etc.) |
| 2. Work place       | 6. Other  |
| 3. School / college |   |
| 4. Other office     |   |

**8B. "In what city or county is that place located?"**

- |                         |                           |
|-------------------------|---------------------------|
| 1. District of Columbia | 7. Prince George's County |
| 2. Arlington County     | 8. Montgomery County      |
| 3. City of Alexandria   | 9. Elsewhere in Virginia  |
| 4. City of Falls Church | 10. Elsewhere in Maryland |
| 5. Fairfax County       | 11. Other                 |
| 6. Fairfax City         |                           |

**8C. "What is the address of or the intersection nearest to that place?" NOT A PROBLEM IF PERSON DOES NOT KNOW OR REFUSES TO ANSWER**

**9. "How will you be getting there?"**

- |                             |                        |
|-----------------------------|------------------------|
| 1. Auto: Drove              | 7. MARC, VRE or Amtrak |
| 2. Auto: Passenger          | 8. Walk                |
| 3. Auto: Drop-off           | 9. Bicycle             |
| 4. Walk/Bike to Metrorail   | 10. Taxi               |
| 5. Bus/Shuttle to Metrorail | 11. Other              |
| 6. Bus/Shuttle Only         |                        |

**"Thank you for your time."**

## **Retail Intercept Questionnaire**

INTERVIEWER TO RECORD ARRIVAL TIME.

**“Excuse me. Metro is conducting a travel survey. Could I ask you a few questions?”**

**OPTIONAL, IF NECESSARY: “It should only take a few moments, and your responses will be confidential.”**

**1. “Why did you come here today?”**

- |             |             |
|-------------|-------------|
| 1. Shopping | 4. Employee |
| 2. Eating   | 5. Banking  |
| 3. Business | 6. Other    |

**2. “How did you get here?”**

- |                              |                        |
|------------------------------|------------------------|
| 1. Auto: Drove               | 7. MARC, VRE or Amtrak |
| 2. Auto: Passenger           | 8. Walk                |
| 3. Auto: Drop-off            | 9. Bicycle             |
| 4. Metrorail and Walk/Bike   | 10. Taxi               |
| 5. Metrorail and Bus/Shuttle | 11. Other              |
| 6. Bus/Shuttle Only          |                        |

**3. ONLY FOR METRORAIL AND BUS USERS (#4, #5 AND #6 ABOVE): “Did you have a car available for your trip here?”**

1. Yes
2. No

**4. IF PERSON IS BY THEMSELVES: “Did you come here by yourself?” If YES, RECORD “ONE” BELOW. IF ANSWER IS NO, ASK THE FOLLOWING, AND ASK THE FOLLOWING IF THE PERSON IS WITH A GROUP (TWO OR MORE): “How many people came in your group, including yourself?”**

- |        |                 |
|--------|-----------------|
| 1. One | 3. Three        |
| 2. Two | 4. Four or more |

**5. “What kind of place did you come from prior to coming here?”**

- |                         |   |
|-------------------------|---|
| 1. Home                 | 5. Other retail or commercial establishment |
| 2. Work place           | 6. Hotel or motel                           |
| 3. School / college     | 7. Tourist attraction                       |
| 4. Restaurant or eatery | 8. Other                                    |

**5A. “In what city or county is that place located?”**

- |                         |                           |
|-------------------------|---------------------------|
| 1. District of Columbia | 7. Prince George’s County |
| 2. Arlington County     | 8. Montgomery County      |
| 3. City of Alexandria   | 9. Elsewhere in Virginia  |
| 4. City of Falls Church | 10. Elsewhere in Maryland |
| 5. Fairfax County       | 11. Other                 |
| 6. Fairfax City         |                           |

5B. **“What is the address of or the intersection nearest to that place?”** NOT A PROBLEM  
IF PERSON DOES NOT KNOW OR REFUSES TO ANSWER

6. **“How long do you expect to be here?”** [INTERVIEWER TO RECORD TIME]

7. **“Where will you go after leaving here?”**

1. Same place as before – GO TO QUESTION 8
2. Other place - IF OTHER PLACE –ASK AND RECORD FOR QUESTIONS 7A THRU 7C

7A. ASK THIS QUESTION IF THE ANSWER GIVEN IN QUESTION 7 IS “OTHER PLACE”, AND IS NOT OBVIOUS: **“What kind of place is that?”**

- |                         |   |
|-------------------------|---|
| 1. Home                 | 5. Other retail or commercial establishment |
| 2. Work place           | 6. Hotel or motel                           |
| 3. School / college     | 7. Tourist attraction                       |
| 4. Restaurant or eatery | 8. Other                                    |

7B. **“In what city or county is that place located?”**

- |                         |                           |
|-------------------------|---------------------------|
| 1. District of Columbia | 7. Prince George’s County |
| 2. Arlington County     | 8. Montgomery County      |
| 3. City of Alexandria   | 9. Elsewhere in Virginia  |
| 4. City of Falls Church | 10. Elsewhere in Maryland |
| 5. Fairfax County       | 11. Other                 |
| 6. Fairfax City         |                           |

7C. **“What is the address of or the intersection nearest to that place?”** NOT A PROBLEM  
IF PERSON DOES NOT KNOW OR REFUSES TO ANSWER

8. **“How will you be getting there?”**

- |                             |                        |
|-----------------------------|------------------------|
| 1. Auto: Drove              | 7. MARC, VRE or Amtrak |
| 2. Auto: Passenger          | 8. Walk                |
| 3. Auto: Drop-off           | 9. Bicycle             |
| 4. Walk/Bike to Metrorail   | 10. Taxi               |
| 5. Bus/Shuttle to Metrorail | 11. Other              |
| 6. Bus/Shuttle Only         |                        |

**“Thank you for your time.”**



## Hotel Intercept Questionnaire

INTERVIEWER TO RECORD ARRIVAL TIME.

**“Excuse me. Metro is conducting a travel survey. Could I ask you a few questions?”**

**OPTIONAL, IF NECESSARY: “It should only take a few moments, and your responses will be confidential.”**

**1. “Why did you come here?”**

- |                                    |                                  |
|------------------------------------|----------------------------------|
| 1. Employee                        | 4. Both #2 and #3                |
| 2. Overnight guest                 | 5. Going to restaurant or lounge |
| 3. Attending meeting or conference | 6. Other                         |

**IF EMPLOYEE (#1 ABOVE), STOP SURVEY. “Thank you. We are only asking questions to hotel guests and visitors.”**

**2. “Have you been outside this hotel earlier today?”**

1. Yes
2. No – GO TO QUESTION 7

**3. “How did you return or come to this hotel?”**

- |                              |                        |
|------------------------------|------------------------|
| 1. Auto: Drove               | 7. MARC, VRE or Amtrak |
| 2. Auto: Passenger           | 8. Walk                |
| 3. Auto: Drop-off            | 9. Bicycle             |
| 4. Metrorail and Walk/Bike   | 10. Taxi               |
| 5. Metrorail and Bus/Shuttle | 11. Other              |
| 6. Bus/Shuttle               |                        |

**4. ONLY FOR METRORAIL AND BUS USERS (#4, #5 AND #6 ABOVE): “Did you have a car available?”**

1. Yes
2. No

**5. IF PERSON IS BYTHEMSELVES: “Did you return to the hotel by yourself?” If YES, RECORD “ONE” BELOW. IF ANSWER IS NO, ASK THE FOLLOWING, AND ASK THE FOLLOWING IF THE PERSON IS WITH A GROUP (TWO OR MORE): “How many people were in your group, including yourself?”**

- |        |                 |
|--------|-----------------|
| 1. One | 3. Three        |
| 2. Two | 4. Four or more |

**6. “What kind of place did you come from prior to coming here?”**

- |                          |                                       |
|--------------------------|---------------------------------------|
| 1. Home                  | 5. Retail or commercial establishment |
| 2. Work place            | 6. Tourist attraction                 |
| 3. Conference or meeting | 7. Airport or train station           |
| 4. Restaurant or eatery  | 8. Other                              |

**6A. "In what city or county is that place located?"**

- |                         |                           |
|-------------------------|---------------------------|
| 1. District of Columbia | 7. Prince George's County |
| 2. Arlington County     | 8. Montgomery County      |
| 3. City of Alexandria   | 9. Elsewhere in Virginia  |
| 4. City of Falls Church | 10. Elsewhere in Maryland |
| 5. Fairfax County       | 11. Other                 |
| 6. Fairfax City         |                           |

**7. "Will you be going outside this hotel later today?"**

1. Yes
2. No – STOP SURVEY

**7A. "What kind of place will you be going to?"**

- |                          |                                       |
|--------------------------|---------------------------------------|
| 1. Home                  | 5. Retail or commercial establishment |
| 2. Work place            | 6. Tourist attraction                 |
| 3. Conference or meeting | 7. Airport or train station           |
| 4. Restaurant or eatery  | 8. Other                              |

**7B. "In what city or county is that place located?"**

- |                         |                           |
|-------------------------|---------------------------|
| 1. District of Columbia | 7. Prince George's County |
| 2. Arlington County     | 8. Montgomery County      |
| 3. City of Alexandria   | 9. Elsewhere in Virginia  |
| 4. City of Falls Church | 10. Elsewhere in Maryland |
| 5. Fairfax County       | 11. Other                 |
| 6. Fairfax City         |                           |

**7C. "How will you be getting there?"**

- |                             |                        |
|-----------------------------|------------------------|
| 1. Auto: Drove              | 7. MARC, VRE or Amtrak |
| 2. Auto: Passenger          | 8. Walk                |
| 3. Auto: Drop-off           | 9. Bicycle             |
| 4. Walk/Bike to Metrorail   | 10. Taxi               |
| 5. Bus/Shuttle to Metrorail | 11. Other              |
| 6. Bus/Shuttle              |                        |

**"Thank you for your time."**

## Movie Theater Intercept Questionnaire

INTERVIEWER TO RECORD ARRIVAL TIME.

**“Excuse me. Metro is conducting a travel survey. Could I ask you a few questions?”**

**OPTIONAL, IF NECESSARY: “It should only take a few moments, and your responses will be confidential.”**

**1. “How did you get here?”**

- |                              |                        |
|------------------------------|------------------------|
| 1. Auto: Drove               | 7. MARC, VRE or Amtrak |
| 2. Auto: Passenger           | 8. Walk                |
| 3. Auto: Drop-off            | 9. Bicycle             |
| 4. Metrorail and Walk/Bike   | 10. Taxi               |
| 5. Metrorail and Bus/Shuttle | 11. Other              |
| 6. Bus/Shuttle Only          |                        |

**2. ONLY FOR METRORAIL AND BUS USERS (#4, #5 AND #6 ABOVE): “Did you have a car available for your trip here?”**

1. Yes
2. No

**3. IF PERSON IS BYTHEMSELVES: “Did you come here by yourself?” If YES, RECORD “ONE” BELOW. IF ANSWER IS NO, ASK THE FOLLOWING, AND ASK THE FOLLOWING IF THE PERSON IS WITH A GROUP (TWO OR MORE): “How many people came in your group, including yourself?”**

- |        |                 |
|--------|-----------------|
| 1. One | 3. Three        |
| 2. Two | 4. Four or more |

**4. “What kind of place did you come from prior to coming here?”**

- |                         |                                       |
|-------------------------|---------------------------------------|
| 1. Home                 | 5. Retail or commercial establishment |
| 2. Work place           | 6. Tourist attraction or hotel        |
| 3. School / college     | 7. Other                              |
| 4. Restaurant or eatery |                                       |

**4A. “In what city or county is that place located?”**

- |                         |                           |
|-------------------------|---------------------------|
| 1. District of Columbia | 7. Prince George’s County |
| 2. Arlington County     | 8. Montgomery County      |
| 3. City of Alexandria   | 9. Elsewhere in Virginia  |
| 4. City of Falls Church | 10. Elsewhere in Maryland |
| 5. Fairfax County       | 11. Other                 |
| 6. Fairfax City         |                           |

**4B. “What is the address of or the intersection nearest to that place?” NOT A PROBLEM IF PERSON DOES NOT KNOW OR REFUSES TO ANSWER**



**5. "Where will you go after leaving here?"**

1. Same place as before – GO TO QUESTION 6
2. Other place - IF OTHER PLACE –ASK AND RECORD FOR QUESTIONS 5A THRU 5C

**5A. ASK THIS QUESTION IF THE ANSWER GIVEN IN QUESTION 5 IS "OTHER PLACE", AND IS NOT OBVIOUS: "What kind of place is that?"**

- |                         |                                       |
|-------------------------|---------------------------------------|
| 1. Home                 | 5. Retail or commercial establishment |
| 2. Work place           | 6. Tourist attraction or hotel        |
| 3. School / college     | 7. Other                              |
| 4. Restaurant or eatery |                                       |

**5B. "In what city or county is that place located?"**

- |                         |                           |
|-------------------------|---------------------------|
| 1. District of Columbia | 7. Prince George's County |
| 2. Arlington County     | 8. Montgomery County      |
| 3. City of Alexandria   | 9. Elsewhere in Virginia  |
| 4. City of Falls Church | 10. Elsewhere in Maryland |
| 5. Fairfax County       | 11. Other                 |
| 6. Fairfax City         |                           |

**5C. "What is the address of or the intersection nearest to that place?" NOT A PROBLEM IF PERSON DOES NOT KNOW OR REFUSES TO ANSWER**

**6. "How will you be getting there?"**

- |                             |                        |
|-----------------------------|------------------------|
| 1. Auto: Drove              | 7. MARC, VRE or Amtrak |
| 2. Auto: Passenger          | 8. Walk                |
| 3. Auto: Drop-off           | 9. Bicycle             |
| 4. Walk/Bike to Metrorail   | 10. Taxi               |
| 5. Bus/Shuttle to Metrorail | 11. Other              |
| 6. Bus/Shuttle Only         |                        |

**"Thank you for your time."**

## Office Visitor Intercept Recording Sheet

Site Name: \_\_\_\_\_

Interviewer: \_\_\_\_\_

Begin Time: \_\_\_\_\_

Location Number  
(If more than One at Site) \_\_\_\_\_

Date: \_\_\_\_\_

End Time: \_\_\_\_\_

ARRIVAL TIME	(1)	(2)	(3)	(4)	(5)	(6)	(6A)	(6B)	(7)	(8)	(8A)	(8B)	(8C)	(9)
_____ A/P	_____	_____	_____	_____	_____	_____	_____	_____	_____ H _____ M	_____	_____	_____	_____	_____
_____ A/P	_____	_____	_____	_____	_____	_____	_____	_____	_____ H _____ M	_____	_____	_____	_____	_____
_____ A/P	_____	_____	_____	_____	_____	_____	_____	_____	_____ H _____ M	_____	_____	_____	_____	_____
_____ A/P	_____	_____	_____	_____	_____	_____	_____	_____	_____ H _____ M	_____	_____	_____	_____	_____
_____ A/P	_____	_____	_____	_____	_____	_____	_____	_____	_____ H _____ M	_____	_____	_____	_____	_____
_____ A/P	_____	_____	_____	_____	_____	_____	_____	_____	_____ H _____ M	_____	_____	_____	_____	_____
_____ A/P	_____	_____	_____	_____	_____	_____	_____	_____	_____ H _____ M	_____	_____	_____	_____	_____
_____ A/P	_____	_____	_____	_____	_____	_____	_____	_____	_____ H _____ M	_____	_____	_____	_____	_____
_____ A/P	_____	_____	_____	_____	_____	_____	_____	_____	_____ H _____ M	_____	_____	_____	_____	_____
_____ A/P	_____	_____	_____	_____	_____	_____	_____	_____	_____ H _____ M	_____	_____	_____	_____	_____
_____ A/P	_____	_____	_____	_____	_____	_____	_____	_____	_____ H _____ M	_____	_____	_____	_____	_____
_____ A/P	_____	_____	_____	_____	_____	_____	_____	_____	_____ H _____ M	_____	_____	_____	_____	_____
_____ A/P	_____	_____	_____	_____	_____	_____	_____	_____	_____ H _____ M	_____	_____	_____	_____	_____
_____ A/P	_____	_____	_____	_____	_____	_____	_____	_____	_____ H _____ M	_____	_____	_____	_____	_____
_____ A/P	_____	_____	_____	_____	_____	_____	_____	_____	_____ H _____ M	_____	_____	_____	_____	_____
_____ A/P	_____	_____	_____	_____	_____	_____	_____	_____	_____ H _____ M	_____	_____	_____	_____	_____
_____ A/P	_____	_____	_____	_____	_____	_____	_____	_____	_____ H _____ M	_____	_____	_____	_____	_____
_____ A/P	_____	_____	_____	_____	_____	_____	_____	_____	_____ H _____ M	_____	_____	_____	_____	_____

## Retail Intercept Recording Sheet

Site Name: \_\_\_\_\_

Interviewer: \_\_\_\_\_

Begin Time: \_\_\_\_\_

Location Number  
(If more than One at Site) \_\_\_\_\_

Date: \_\_\_\_\_

End Time: \_\_\_\_\_

ARRIVAL TIME	(1)	(2)	(3)	(4)	(5)	(5A)	(5B)	(6)	(7)	(7A)	(7B)	(7C)	(8)
_____ AM/PM	_____	_____	_____	_____	_____	_____	_____	_____ H _____ M	_____	_____	_____	_____	_____
_____ AM/PM	_____	_____	_____	_____	_____	_____	_____	_____ H _____ M	_____	_____	_____	_____	_____
_____ AM/PM	_____	_____	_____	_____	_____	_____	_____	_____ H _____ M	_____	_____	_____	_____	_____
_____ AM/PM	_____	_____	_____	_____	_____	_____	_____	_____ H _____ M	_____	_____	_____	_____	_____
_____ AM/PM	_____	_____	_____	_____	_____	_____	_____	_____ H _____ M	_____	_____	_____	_____	_____
_____ AM/PM	_____	_____	_____	_____	_____	_____	_____	_____ H _____ M	_____	_____	_____	_____	_____
_____ AM/PM	_____	_____	_____	_____	_____	_____	_____	_____ H _____ M	_____	_____	_____	_____	_____
_____ AM/PM	_____	_____	_____	_____	_____	_____	_____	_____ H _____ M	_____	_____	_____	_____	_____
_____ AM/PM	_____	_____	_____	_____	_____	_____	_____	_____ H _____ M	_____	_____	_____	_____	_____
_____ AM/PM	_____	_____	_____	_____	_____	_____	_____	_____ H _____ M	_____	_____	_____	_____	_____
_____ AM/PM	_____	_____	_____	_____	_____	_____	_____	_____ H _____ M	_____	_____	_____	_____	_____
_____ AM/PM	_____	_____	_____	_____	_____	_____	_____	_____ H _____ M	_____	_____	_____	_____	_____
_____ AM/PM	_____	_____	_____	_____	_____	_____	_____	_____ H _____ M	_____	_____	_____	_____	_____
_____ AM/PM	_____	_____	_____	_____	_____	_____	_____	_____ H _____ M	_____	_____	_____	_____	_____
_____ AM/PM	_____	_____	_____	_____	_____	_____	_____	_____ H _____ M	_____	_____	_____	_____	_____
_____ AM/PM	_____	_____	_____	_____	_____	_____	_____	_____ H _____ M	_____	_____	_____	_____	_____
_____ AM/PM	_____	_____	_____	_____	_____	_____	_____	_____ H _____ M	_____	_____	_____	_____	_____



Hotel Intercept Recording Sheet

Site Name: \_\_\_\_\_  
Location Number  
(If more than One at Site) \_\_\_\_\_

Interviewer: \_\_\_\_\_  
Date: \_\_\_\_\_

Begin Time: \_\_\_\_\_  
End Time: \_\_\_\_\_

ARRIVAL TIME	(1)	(2)	(3)	(4)	(5)	(6)	(6A)	(7)	(7A)	(7B)	7C)
_____ AM/PM	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ AM/PM	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ AM/PM	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ AM/PM	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ AM/PM	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ AM/PM	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ AM/PM	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ AM/PM	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ AM/PM	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ AM/PM	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ AM/PM	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ AM/PM	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ AM/PM	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ AM/PM	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ AM/PM	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ AM/PM	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ AM/PM	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ AM/PM	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ AM/PM	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____

**Movie Theater Intercept Recording Sheet**

Site Name: \_\_\_\_\_  
 Location Number  
 (If more than One at Site) \_\_\_\_\_

Interviewer: \_\_\_\_\_  
 Date: \_\_\_\_\_

Begin Time: \_\_\_\_\_  
 End Time: \_\_\_\_\_

ARRIVAL TIME	(1)	(2)	(3)	(4)	(4A)	(4B)	(5)	(5A)	(5B)	(5C)	(6)
_____ AM/PM	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ AM/PM	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ AM/PM	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ AM/PM	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ AM/PM	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ AM/PM	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ AM/PM	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ AM/PM	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ AM/PM	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ AM/PM	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ AM/PM	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ AM/PM	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ AM/PM	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ AM/PM	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ AM/PM	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ AM/PM	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ AM/PM	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ AM/PM	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ AM/PM	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ AM/PM	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ AM/PM	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____

## **B.6 Introduction Letters**



May 3, 2005



Dear Washington Metropolitan Area Property Owner or Manager:

The Washington Metropolitan Area Transit Authority (WMATA) has enlisted the services of Parsons Brinkerhoff, a professional transportation planning consulting firm, and Diversity Services, a professional survey firm, to conduct a survey of travel characteristics for those who live, work, visit, shop or play around several metro station areas throughout the Washington region. Essential to this study is the development of a database of travel characteristics at existing office, residential, retail, hotel and entertainment properties. This information will assist WMATA and our jurisdictional partners in our planning efforts throughout the region. The results will provide valuable information to our transportation planners about the relationship between land use and transit and the role proximity to a station plays in that relationship. We have identified 55 sites throughout the region within ½ mile of our stations where we would like to undertake our survey efforts. Your building is one of those sites.

The enclosed questionnaire requests information from residents in your building about their daily travel patterns. We are seeking your assistance with these tasks: announcing the survey and distributing the questionnaires to residents, as well as collecting the surveys once they are completed. We would like to begin this effort by leaving surveys with you the week of May 9, 2005, and receive replies back from residents by May 25, 2005.

In the week preceding the survey, we will send an announcement for you to provide to the residents in your building. Our survey staff, identified in blue vests, will come to the building on the designated day leave the surveys with the Management Office. Surveys can be returned via two methods: through a drop-box at your main desk or by postage paid mailer. For those properties amenable to using the drop-box, our staff will return on May 26 to retrieve them.

We greatly appreciate any assistance you can provide for these efforts and believe that the data gathered from these surveys will benefit not only WMATA and our jurisdictional partners, but property managers around the region as well. Should you have any questions concerning the study or survey process, contact Jason Yazawa with Parsons Brinkerhoff at 703-742-5820.

Very truly,

*Joel R. Washington*

Joel R. Washington  
Acting Director  
Office of Planning

**Washington  
Metropolitan Area  
Transit Authority**

600 Fifth Street, NW  
Washington, D.C. 2001  
202/962-1234

*By Metrorail:  
Judiciary Square-Red Line  
Gallery Place-Chinatown  
Red, Green and  
Yellow Lines*

*A District of Columbia  
Maryland and Virginia  
Transit Partnership*

May 3, 2005



Dear Washington Metropolitan Area Employer:

The Washington Metropolitan Area Transit Authority (WMATA) has enlisted the services of Parsons Brinkerhoff, a transportation planning consulting firm, and Diversity Services of DC, Inc., a professional services firm, to conduct a survey of travel characteristics of those who live, work, visit, shop or play around several metro station areas throughout the Washington region. Data gathered from this survey will provide input to the development of a database of travel characteristics at existing office, residential, retail, hotel and entertainment properties. This information will assist WMATA and our jurisdictional partners in our planning efforts throughout the region. The results will provide valuable information to our transportation planners about the relationship between land use and transit and the role proximity to a station plays in that relationship. We have identified 55 sites throughout the region within ½ mile of our stations where we would like to undertake our survey efforts. Your building is one of those sites.

The questionnaires request information from each employee in your office about their daily travel patterns. It should take no more than 8 minutes to complete. We are seeking your assistance with distributing the questionnaires to employees. We realize that this may be a slight inconvenience to you, however, we do believe that the investment of this small amount of time on your part will be worth the effort as it will greatly assist transportation planning in the Washington Metropolitan Area.

We are beginning this effort the week of May 9, 2005, and concluding it by May 20. Our survey staff, identified in blue vests, will come to the building on the designated day to bring you the surveys. They also will leave a 'drop box' either centrally located on your floor (likely near the elevators) or one general box in the lobby. They will notify you as to where the boxes for your building are located and we would ask that you alert employees to that location. We are asking employees to return the completed surveys one week from the day they are distributed. Our staff will then return at the end of one week's time to retrieve the drop boxes.

In addition, we will be surveying visitors to your building. On one day during the survey weeks noted above, you may notice blue-vested survey staff positioned at the entrances to your building during normal work hours. They will intercept visitors on their way into the building and ask them if they would answer a very brief set of questions about how they arrived at your building that day. Building employees will not be asked this set of questions.

We greatly appreciate your cooperation and believe that the data gathered from these surveys will benefit not only WMATA and our jurisdictional partners, but employers around the region as well. Should you have any questions concerning the study or survey process, contact Jason Yazawa with Parsons Brinkerhoff at 703-742-5820.

Very truly,

*Joel R. Washington*

Joel R. Washington  
Acting Director  
Office of Planning

**Washington  
Metropolitan Area  
Transit Authority**

600 Fifth Street, NW  
Washington, D.C. 2001  
202/962-1234

*By Metrorail:  
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Yellow Lines*

*A District of Columbia  
Maryland and Virginia  
Transit Partnership*

May 3, 2005



Dear Washington Metropolitan Area Building Owner or Manager:

The Washington Metropolitan Area Transit Authority (WMATA) has enlisted the services of Parsons Brinkerhoff, a professional transportation planning consulting firm, and Diversity Services, a professional survey firm, to conduct a survey of travel characteristics for those who live, work, visit, shop or play around several metro station areas throughout the Washington region. Essential to this study is the development of a database of travel characteristics at existing office, residential, retail, hotel and entertainment properties. This information will assist WMATA and our jurisdictional partners in our planning efforts throughout the region. The results will provide valuable information to our transportation planners about the relationship between land use and transit and the role proximity to a station plays in that relationship. We have identified 55 sites throughout the region within ½ mile of our stations where we would like to undertake our survey efforts. Your building is one of those sites.

The enclosed questionnaires request information from employees in your building about their daily travel patterns. We are seeking your assistance with these tasks: announcing the survey and distributing the questionnaires to employers, as well as collecting the surveys once they are completed. We would like to begin this effort the week of May 9, 2005, and conclude it by May 20. Our Project Manager will contact you next week to provide the date for your building.

In the week preceding the survey, we will send an announcement for you to provide to the employers in your building. Our survey staff, identified in blue vests, will come to the building on the designated day and distribute the surveys to each employer. They will locate a 'drop box' (or boxes) in a place of your designation (e.g., one general box in the lobby or one per floor). Staff will then return at the end of the week to retrieve the survey boxes.

In addition, we would like to capture information about the travel patterns of visitors to your building. On **one** day during the survey weeks noted above, blue-vested survey staff would be positioned at the entrances to your building during normal work hours to intercept visitors and ask them a very brief set of questions about how they arrived at your building that day.

We greatly appreciate any assistance you can provide for these efforts and believe that the data gathered from these surveys will benefit not only WMATA and our jurisdictional partners, but employers around the region as well. Should you have any questions concerning the study or survey process, contact Jason Yazawa with Parsons Brinkerhoff at 703-742-5820.

Very truly,

*Joel R. Washington*

Joel R. Washington  
Acting Director  
Office of Planning

**Washington  
Metropolitan Area  
Transit Authority**

600 Fifth Street, NW  
Washington, D.C. 2001  
202/962-1234

*By Metrorail:  
Judiciary Square-Red Line  
Gallery Place-Chinatown  
Red, Green and  
Yellow Lines*

*A District of Columbia  
Maryland and Virginia  
Transit Partnership*



May 3, 2005



Re: WMATA Travel Survey

Dear Resident:

The Washington Metropolitan Area Transit Authority (WMATA) is conducting a survey of travel characteristics of those who live, work, visit, shop or play around several metro station areas throughout the Washington region. Data gathered from this survey will provide input to a database of travel characteristics at existing office, residential, retail, hotel and entertainment properties. This information will assist WMATA and our jurisdictional partners in our *land use and capacity planning* efforts throughout the region. The results will provide valuable information to our transportation planners about the relationship between land use and transit and the role proximity to a station plays in that relationship. We have identified 55 sites throughout the region within ½ mile of our stations where we would like to undertake our survey efforts. Your building is one of those sites.

During the week of May 9, 2005, surveys inquiring about the travel patterns of those in your household will be distributed. No identification information is asked on the questionnaire and all responses will be reported only in an aggregate form. On the back of the survey you will find a business reply mailing address, simply fold the questionnaire as directed and mail. No postage is required. We would like to have all responses from residents in the mail by **May 25, 2005**.

We greatly appreciate your assistance with these efforts and believe that the data gathered from these surveys will benefit not only WMATA and our jurisdictional partners, but residents around the region as well.

Very truly,

*Joel R. Washington*

Joel R. Washington  
Acting Director  
Office of Planning

**Washington  
Metropolitan Area  
Transit Authority**

600 Fifth Street, NW  
Washington, D.C. 20011  
202/962-1234

*By Metrorail:  
Judiciary Square-Red Line  
Gallery Place-Chinatown  
Red, Green and  
Yellow Lines*

*A District of Columbia  
Maryland and Virginia  
Transit Partnership*

May 3, 2005



Re: WMATA Development Related Ridership Study

Dear U Street Retailer:

The Washington Metropolitan Area Transit Authority (WMATA) has enlisted the services of Parsons Brinkerhoff, a transportation planning consulting firm, and Diversity Services of DC, Inc., a professional services firm, to conduct a survey of travel characteristics of those who live, work, visit, shop or play around several metro station areas throughout the Washington region. Data gathered from this survey will provide input to the development of a database of travel characteristics at existing office, residential, retail, hotel and entertainment properties. This information will assist WMATA and our jurisdictional partners in our planning efforts throughout the region. The results will provide valuable information to our transportation planners about the relationship between land use and transit and the role proximity to a station plays in that relationship. We have identified 55 sites throughout the region within ½ mile of our stations where we would like to undertake our survey efforts. The U Street retail corridor is one of those sites.

On either Tuesday, Wednesday or Thursday of next week (beginning May 9th) or the following week (beginning May 16th), survey staff, identified in blue vests, will be stationed along the sidewalk on U Street, between 12<sup>th</sup> and 15<sup>th</sup> Streets asking pedestrians a very brief set of questions about how they arrived at U Street that day. Survey staff will carry a letter authorizing them to perform this work on our behalf.

We greatly appreciate any assistance you can provide for these efforts and believe that the data gathered from these surveys will benefit not only WMATA and our jurisdictional partners, but employers and retailers around the region as well. Should you have any questions concerning the study or survey process, contact Jason Yazawa with Parsons Brinkerhoff at 703-742-5820.

Very truly,

*Joel R. Washington*

Joel R. Washington  
Acting Director  
Office of Planning

**Washington  
Metropolitan Area  
Transit Authority**

600 Fifth Street, NW  
Washington, D.C. 2001  
202/962-1234

*By Metrorail:  
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*A District of Columbia  
Maryland and Virginia  
Transit Partnership*