

TECHNICAL MEMORANDUM

To: David Smith Forest City

From: Daniel Solomon
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Date: March 16, 2018

Subject: 375 & 425 M Street, SW – Pedestrian Data Collection Results

INTRODUCTION

This memorandum presents the results of pedestrian data that was collected associated with the Stage 2 Planned Unit Development (PUD) and Modification to the approved First Stage PUD for 375 and 425 M Street, SW (referred to as the “M Street Sites”). The purpose of this memorandum is to:

- Provide a summary of pedestrian data collection methodology;
- Define peak hour observations, patterns, and trends on a weekday (Friday) and a weekend (Saturday); and
- Analyze overall pedestrian activity in the area adjacent to the M Street Sites along 4th Street, SW.

This Statement concludes that:

- The data is representative of areas with higher densities of office use commonly found in the District. During the Friday pedestrian counts, the data shows very typical commuter patterns, with AM and PM peaks and an additional “lunch hour” peak. During the Saturday pedestrian counts, there is a significant decrease in the number of observed pedestrians in the study area when compared to the weekday. Overall, on the Saturday collected, the AM peak hour observed 25% fewer pedestrians, the mid-day peak hour observed 45% fewer pedestrians, and the PM peak hour observed 30% fewer pedestrians on Saturday versus Friday.
- Pedestrian activity on the east side of 4th Street is significantly higher than on the west side of 4th Street. This would be anticipated due to the location of the Waterfront Metrorail station and the presence of the grocery store and food trucks on the east side of 4th Street.
- There is an increase in northbound pedestrians on the eastern side of 4th Street during the morning commute, with an overall increase in pedestrian activity around lunch, and an additional increase in southbound pedestrians on the eastern side of 4th Street during the evening commute. Given the location of the Waterfront Metrorail station, which is south of the study area and on the east side of 4th Street, the increase in northbound pedestrians during the morning commute, and the reverse increase in the southbound pedestrians during the evening commute is indicative of many pedestrians commuting to the study area for work.

- Levels of pedestrian activity during the weekend remain generally constant throughout the day. There are small spikes in pedestrian traffic, but the generally steady levels of pedestrian traffic throughout the day are representative of residential neighborhoods in the District.
- Based on these counts, it is concluded that there is significant pedestrian activity generated by the office use during the weekdays. Consistent with other areas of the District, an increase in residential use will help increase pedestrian activity into the weekday evenings and on weekends.

DATA COLLECTION

This section provides an overview of the methodology and assumptions employed to collect pedestrian data for the two locations identified in Figure 1.

In order to best capture the levels of pedestrian activity in the study area under existing conditions, pedestrian data collection was performed from 7:00AM to 10:00PM on a typical Friday and typical Saturday. A “typical day” is defined as a day when DC Public Schools and Congress are in session, there are no holidays, no significant special events taking place, and favorable weather conditions. It was assumed that data collection during these time periods would sufficiently capture the typical conditions of pedestrian activity surrounding the M Street Sites. The dates of data collection were Friday, September 22, 2017, and Saturday, September 23, 2017.

Full counts broken down by side of the street and direction, as well as aggregated data, can be found in the appendix.

Volume Analysis

The following trends were observed from the results of the pedestrian data collection:

- During the weekday, pedestrian traffic on 4th Street peaks between 8:00-9:00AM, 12:30-1:30PM, and 5:15-6:15PM on 4th Street; Pedestrian activity is significantly higher on the east side of 4th Street in comparison to pedestrian activity on the west side of 4th Street. Total weekday pedestrian volumes, broken down by side of street are shown in Figure 2.
- During the Saturday, pedestrian traffic on 4th Street peaks between 10:15-11:15AM, 12:30-1:30PM, and 4:45-5:45PM. Pedestrian activity is significantly higher on the east side of 4th Street in comparison to pedestrian activity on the west side of 4th Street. Total weekend pedestrian volumes, broken down by side of street are shown in Figure 3.

The data is representative of areas with higher densities of office use commonly found in the District. During the Friday pedestrian counts, the data shows very typical commuter patterns, with an additional “lunch hour” peak. During the Saturday pedestrian counts, there is a significant decrease in the number of observed pedestrians in the study area when compared to the weekday. Overall, on the Saturday collected, the AM peak hour observed 25% fewer pedestrians, the mid-day peak hour observed 45% fewer pedestrians, and the PM peak hour observed 30% fewer pedestrians on Saturday versus Friday.

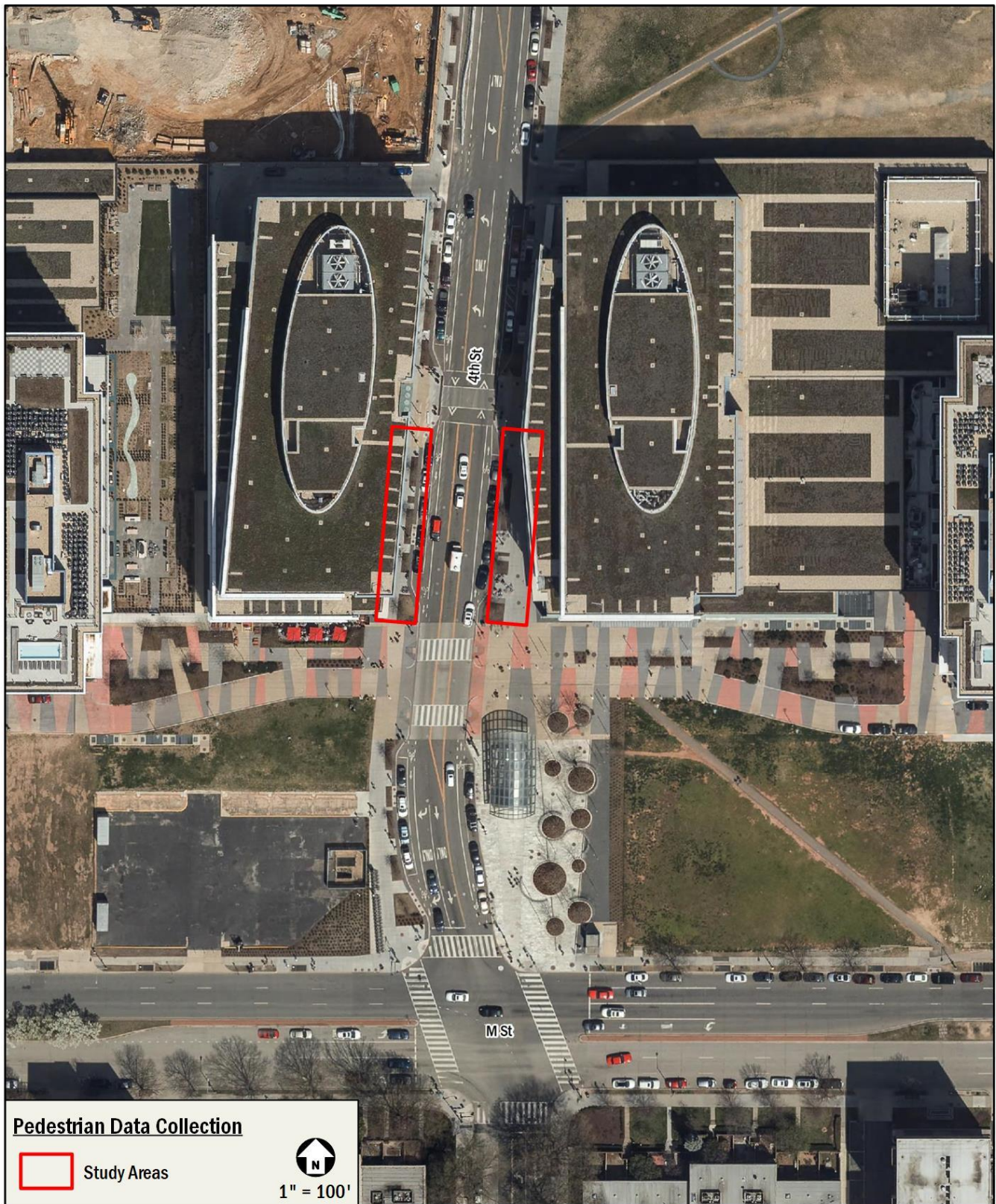


Figure 1: Count Locations

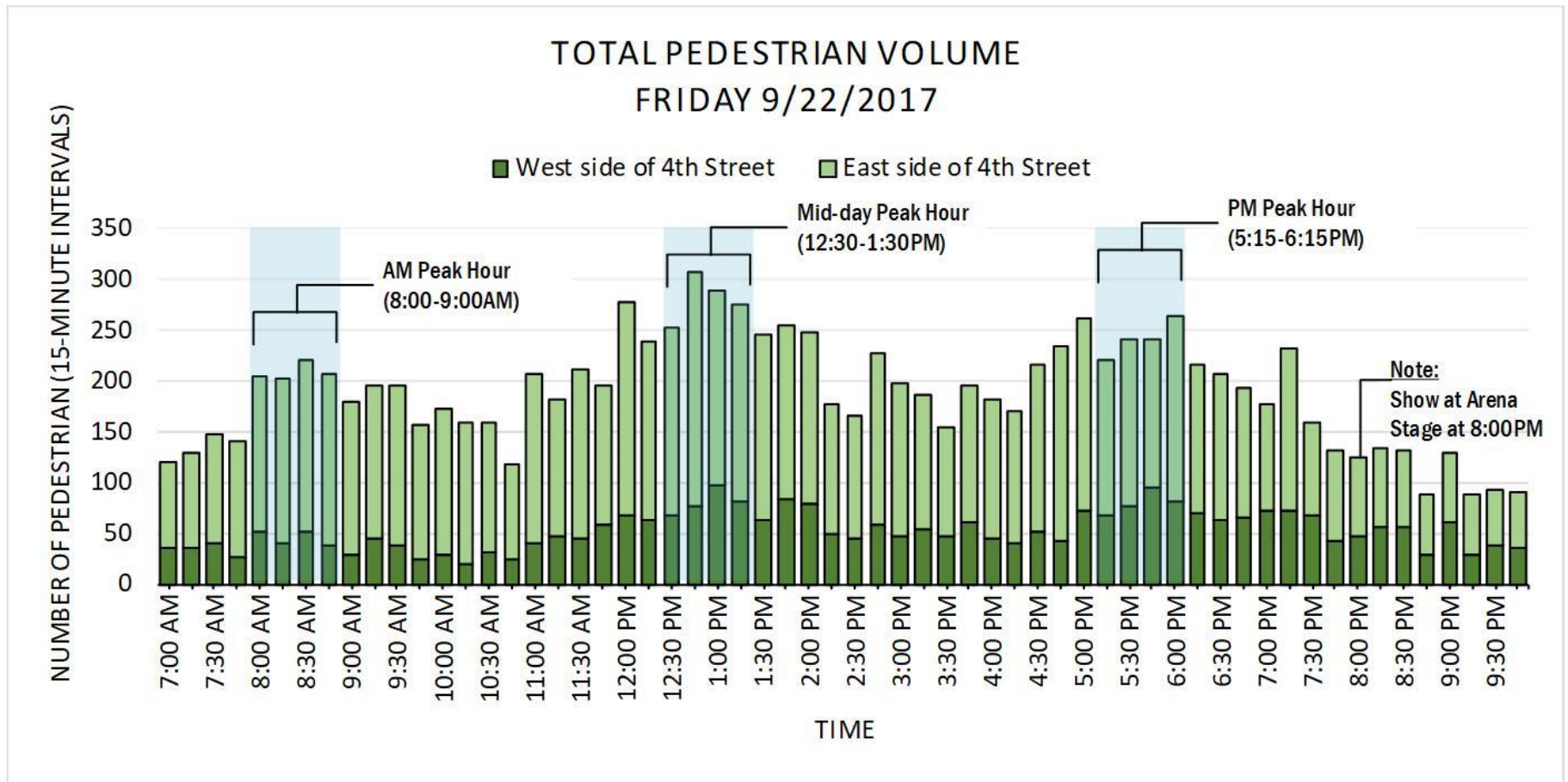


Figure 2: Total Weekday Pedestrian Volume

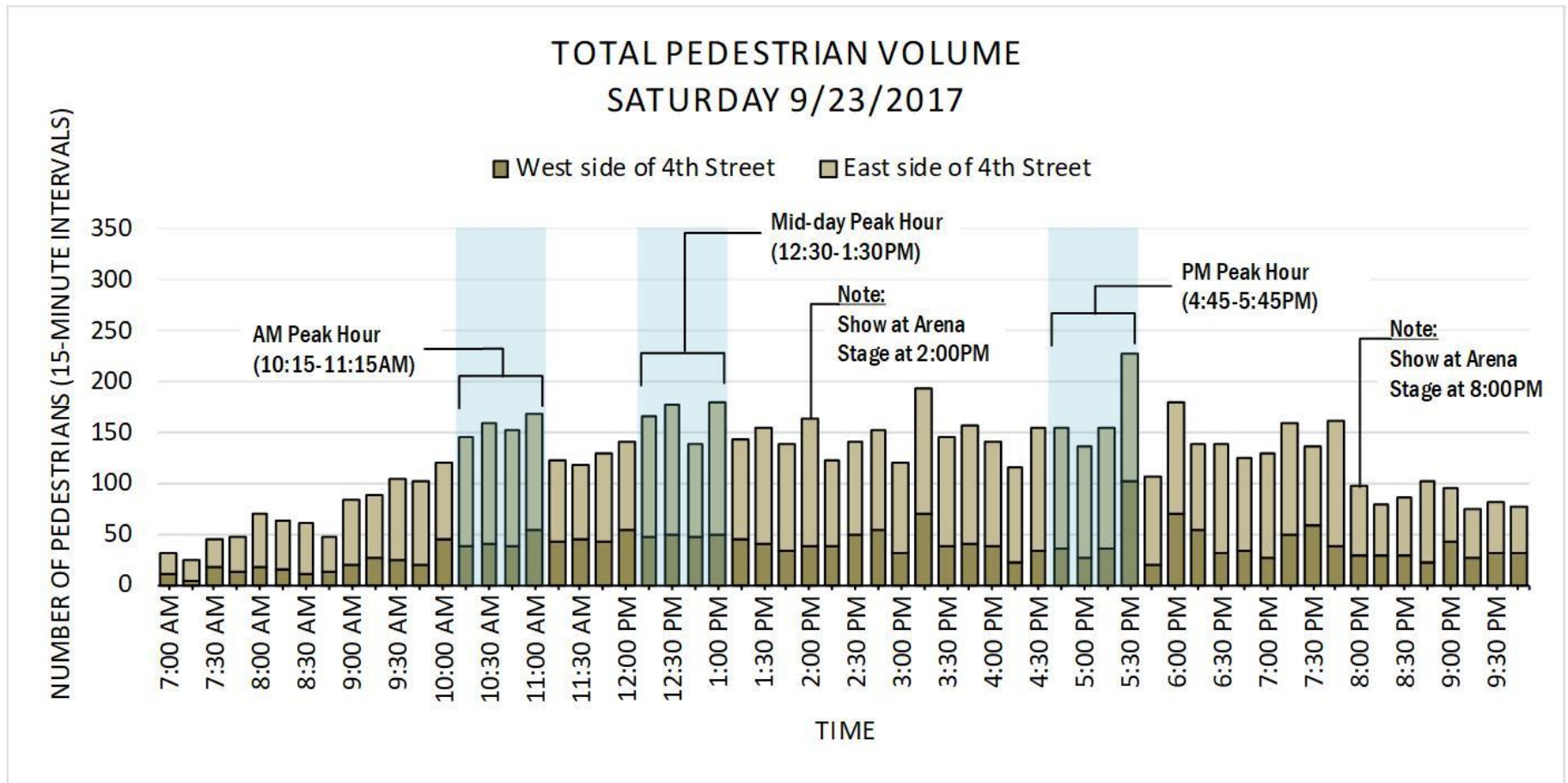


Figure 3: Total Weekend Pedestrian Volume

Weekday Results

Figure 6 displays the observed weekday pedestrian peak hour volumes for the AM, mid-day, and PM peak hours. Figure 4 charts the pedestrian volumes for both sides of the street including direction, using 15-minute intervals to best capture trends. As can be seen, there is a spike in northbound pedestrians on the eastern side of 4th Street during the morning commute, with an overall uptick in pedestrian activity around lunch, and an additional spike in southbound pedestrians on the eastern side of 4th Street during the evening commute. Given the location of the Waterfront Metrorail station, which is south of the study area and on the east side of 4th Street, the uptick in northbound pedestrians during the morning commute and uptick in southbound pedestrians during the evening commute is indicative of many pedestrians commuting to the study area for work.

Overall, the following pedestrian volumes were observed during the peak periods:

- Along the eastern side of 4th Street, there were a total of 654 pedestrians (386 northbound and 268 southbound) during the AM peak hour (8:00-9:00AM), 803 pedestrians (379 northbound and 424 southbound) during the mid-day peak hour (12:30-1:30PM), and 644 pedestrians (285 northbound and 359 southbound) during the PM peak hour (5:15-6:15PM).
- Along the western side of 4th Street, there were a total of 181 pedestrian (139 northbound and 42 southbound) during the AM peak hour (8:00-9:00AM), 321 pedestrians (146 northbound and 175 southbound) during the mid-day peak hour (12:30-1:30PM), and 323 pedestrians (138 northbound and 185 southbound) during the PM peak hour (5:15-6:15PM).

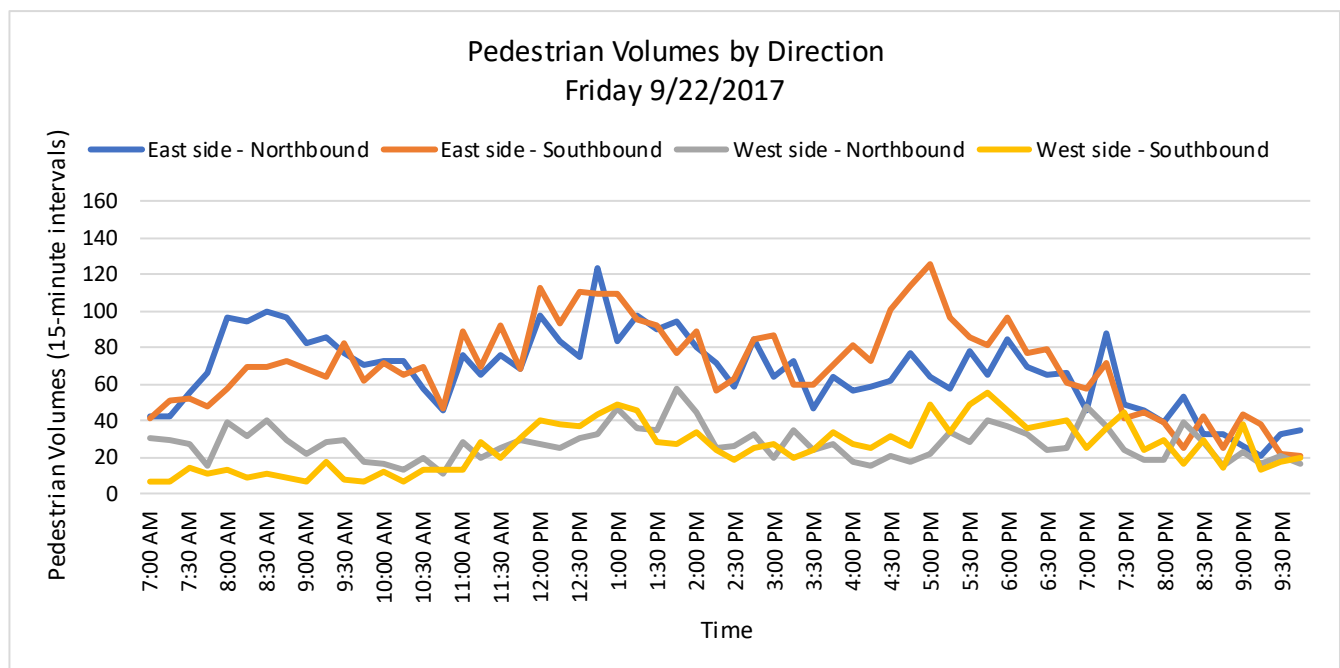


Figure 4: Weekday Pedestrian Volumes by Direction (15-minute intervals)

Weekend Results

Figure 7 displays the observed weekend pedestrian peak hour volumes for the AM, mid-day, and PM peak hours. Figure 5 charts the pedestrian volumes for both sides of the street including direction, using 15-minute intervals so as to best capture trends. As can be seen, levels of pedestrian activity during the weekend remain generally constant throughout the day. There are small spikes in pedestrian traffic on the east side of 4th Street, but the generally steady levels of pedestrian traffic throughout the day are representative of residential neighborhoods in the District.

Overall, the following pedestrian volumes were observed during the peak periods:

- Along the eastern side of 4th Street, there were a total of 456 pedestrians (197 northbound and 259 southbound) during the AM peak hour (10:15-11:15AM), 449 pedestrians (219 northbound and 230 southbound) during the mid-day peak hour (12:30-1:30PM), and 474 pedestrians (229 northbound and 245 southbound) during the PM peak hour (4:45-5:45PM).
- Along the western side of 4th Street, there were a total of 166 pedestrians (74 northbound and 92 southbound) during the AM peak hour (10:15-11:15AM), 166 pedestrians (67 northbound and 99 southbound) during the mid-day peak hour (12:30-1:30PM), and 199 pedestrians (74 northbound and 125 southbound) during the PM peak hour (4:45-5:45PM).

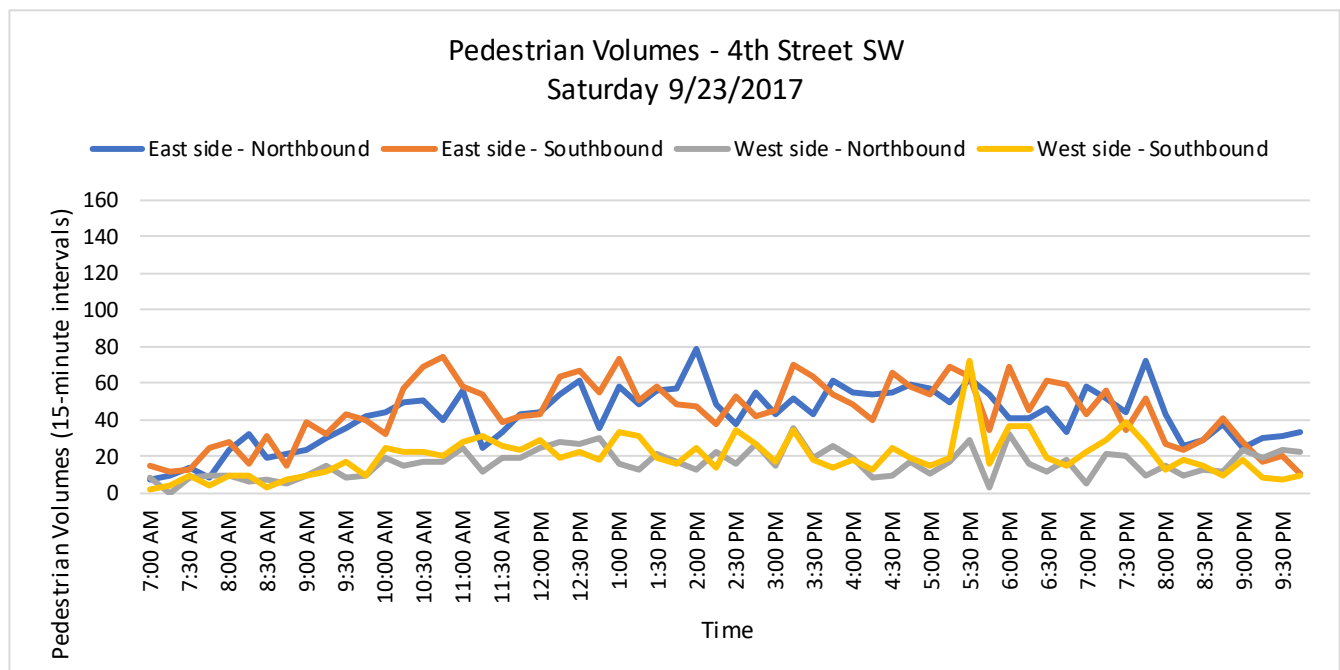


Figure 5: Weekend Pedestrian Volumes by Direction (15-minute intervals)



Figure 6: Weekday Pedestrian Peak Hour Volumes



Figure 7: Weekend Pedestrian Peak Hour Volumes

SUMMARY AND CONCLUSIONS

Overall, the AM peak hour observed 25% fewer pedestrians, the mid-day peak hour observed 45% fewer pedestrians, and the PM peak hour observed 30% fewer pedestrians on Saturday versus Friday. The data is representative of areas with higher densities of office use commonly found in the District. During the Friday pedestrian counts, the data shows very typical commuter patterns, with AM and PM peaks and an additional “lunch hour” peak. During the Saturday pedestrian counts, there is a significant decrease in the number of observed pedestrians in the study area when compared to the weekday.

Based on these counts, it is concluded that there is significant pedestrian activity generated by the office use during the weekdays. Consistent with other areas of the District, an increase in residential use will help increase pedestrian activity into the weekday evenings and on weekends.