

National Park Service
U.S. Department of the Interior

National Mall and Memorial Parks
Washington, D.C.



AN ANALYSIS OF TOUR BUS OPERATIONS WITHIN THE NATIONAL MALL AND MEMORIAL PARKS

Phase V: On-Bus Data Collection and Documentation of Daily Bus Operations

October 2014

This page left blank intentionally.

An Analysis of Tour Bus Operations within the National Mall and Memorial Parks

Phases V: On-Bus Data Collection and Documentation
of Daily Bus Operations

Technical Report Submitted to:

The National Mall and Memorial Parks
900 Ohio Dr. SW
Washington, DC 20024

National Park Service
Denver Service Center
PO Box 25287
Denver, CO 80225-0287

Submitted by:

Margaret Daniels, Ph.D.
Rodney Vese, M.S.
Minkyung Park, Ph.D.
Russ Brayley, Ph.D.
Laurlyn Harmon, Ph.D.
Laurie Schintler, Ph.D.

Contact:

Margaret Daniels, Ph.D.
School of Recreation, Health, and Tourism
George Mason University
10900 University Blvd., MS 4E5
Bull Run Hall, Room 202
Manassas, VA 20110-2203

Voice: (703) 993-4279
Fax: (703) 993-2025
mdaniels@gmu.edu

October 2014

This page left blank intentionally.

EXECUTIVE SUMMARY

STUDY RATIONALE

The National Park Service (NPS), National Mall and Memorial Parks (NAMA), was awarded a grant through the Paul S. Sarbanes Transit in Parks Program to study and make recommendations for improving tour bus operations within NAMA. The *National Mall Plan / Environmental Impact Statement* (NPS 2010) confirmed tour bus parking and traffic congestion problems and suggested that little has been done to address concerns that were previously identified in 2003. The 2010 plan reported that approximately 21-25 million visits occur in the 684-acre national icon each year. Approximately one-third of the visiting public arrives via tour bus: this can total as many as 1200 buses a day operating in and around NAMA during the spring-summer peak season.

The purpose of the current project is to quantitatively and qualitatively document existing conditions and set forth a plan of action for short-term and long-term improvements in operational efficiency. A series of studies is being completed that pertain to operational efficiency, congestion, visitor mobility, access, safety, education, recreation, health benefits and protection of sensitive natural, cultural and historical resources. The data collection is occurring in phases, as indicated in Table A. The current report summarizes Phase V findings, specific to on-bus data collection and documentation of daily bus operations. Acronyms that will be used throughout the report include those for the National Park Service (NPS), George Mason University (GMU), District Department of Transportation (DDOT), Metropolitan Washington Council of Governments (COG), and American Bus Association (ABA).

Eight days of on-bus observational data were collected with eight different tour groups (one per day) using four standardized instruments to systematically document information specific to group activities, congestion, operational efficiency, mobility, access and safety. Four target audiences included school, cultural, adult and Honor Flight veterans, with two tour groups selected for each target audience. Researchers coordinated with NPS, Destination DC and specific tour bus companies to join the school, adult and cultural groups. In accessing veterans, the research team partnered with the Honor Flight Network, “a non-profit organization created solely to honor America's veterans for all their sacrifices. We transport our heroes to Washington, D.C. to visit and reflect at **their** memorials. Top priority is given to the senior veterans – World War II survivors, along with those other veterans who may be terminally ill” (<http://www.honorflight.org/>).

TABLE A: PROJECT PHASES

Project Phase	Study*	Details
I	Off-Bus Data Collection and Photographic Documentation at Loading and Unloading Zones, Part 1	Data collected and analyzed by GMU that is specific to congestion, operational efficiency, mobility, access, safety, and resource protection at loading and unloading zones.
II	Off-bus Data Collection at Gateway Points	Data collected by COG for DDOT specific to tour bus volume and carrying capacity; analyzed by COG and GMU.
III	Off-Bus Data Collection and Photographic Documentation at Loading and Unloading Zones, Part 2	Data collected and analyzed by GMU that is specific to congestion, operational efficiency, mobility, access, safety, and resource protection at loading and unloading zones.

Project Phase	Study*	Details
IV	Off-bus Data Collection at Parking Areas	Data collected and analyzed by GMU that is specific to turnover, stacking, user conflict, and carrying capacity at parking areas adjacent to major destinations as well as parking in peripheral locations.
V*	On-Bus Data Collection and Documentation of Daily Bus Operations	Data collected and analyzed by GMU that is specific to congestion, operational efficiency, mobility, access, safety, education, recreation, health benefits and resource protection during the point-to-point experience
VI	Operator Self-Reports	Data collected and analyzed by GMU that is specific to logs, itineraries, education, recreation, health, vehicle-miles-traveled, methods used to reduce pollution, safety, regulation, and suggestions for improving operational efficiency and energy conservation.
VII	Client Self-Reports	Data collected and analyzed by GMU that is specific to itineraries, group needs, intermodal capabilities of diverse tour group markets and ways to maximize the on-bus and pedestrian experience.

* Highlighted study is current report.

SUMMARY OF FINDINGS

The eight tours differed in terms of group composition, time of year, length of tour, vehicle and pedestrian mileage and itineraries (Table B). In line with these distinctions, the focus of the tours and the benefits provided varied from tour to tour. At the same time, common threads emerged when considering specific sites selected for visitation, noted infractions, drivers' concerns and tour leaders' concerns. Eight thematic areas are presented below to illustrate the similarities and differences that emerged.

Itineraries and Sites Visited

Itineraries varied from half-day tours of four to five hours that were specific to tour groups from South Korea to 14-hour excursions common to school groups and one of the adult groups. The number of sites visited was not solely based on time spent in Washington, DC, as the South Korean groups preferred frequent, short stops rather than fewer long stops. The total number of sites visited (not including meal stops and lodging) was between five and nine. Seven of the eight groups visited the Lincoln Memorial and Korean War Veterans Memorial; six visited the U.S. Capitol, while four groups stopped at Arlington National Cemetery, the U.S. Marine Corps War Memorial and the Vietnam Veterans Memorial. While the researchers joined each tour for a single day, it is worthy of note that the school groups and adult groups had multi-day itineraries. As such, the sites listed on Table C do not represent the full range of destinations visited by these visitors; instead, they are illustrative of a single day in a Washington, DC tour itinerary.

Tour Focus

The overarching focus of all eight tours was education, as each tour had a professional tour guide and/or knowledgeable tour leader who spoke throughout the visit about U.S. history and specific facts and features of Washington, DC and the sites visited. From this starting point, additional emphases varied. A prominent feature of the school group tours was celebration and camaraderie. The students went into the tour knowing each other and were engaged in lively discussions that often had nothing to do with the tour itself. Tour leaders of adult groups stressed areas of prestige, with details regarding ornate architecture and areas of power and influence more likely to emerge, for instance, a focus on Embassy Row and discussions of diplomacy were noted with both adult tours. The cultural tours highlighted American life so that visitors from South Korea could embrace the distinctions between the U.S. and their native country. In contrast, the Honor Flight tour leaders paid ongoing tribute to the World War II veterans that comprised their tour participant base. The Honor Flight tours also focused on reminiscence, with veterans encouraged to interact and share their stories.

Benefits Derived

In addition to the cognitive benefits derived from the educational emphasis of each tour, the visits also resulted in recreational, health, social and emotional benefits. Recreationally, visitors appreciated the beauty of Washington, DC and open spaces of NAMA. They shopped, ate and many stayed in area hotels. Participants received health benefits through miles of walking, with pedestrian miles traveled varying from 2 miles (cultural groups) up to 9.7 miles (school group) and anywhere from 600 to over 2200 calories burned along the way. Socially, the camaraderie evidenced on the tours was often very high, with tour guides, tour leaders and drivers often showing their jovial sides and encouraging participant engagement in the fun. The tours also represented a social opportunity for senior members who might not regularly benefit from group interaction. Emotional benefits were most salient for Honor Flight veterans, who were positioned to recall the best and worst of their wartime experiences while simultaneously receiving ongoing accolades throughout the tour.

Infractions

Researchers documented infractions consistently throughout the tours. Drivers double parked and parked in non-designated areas; loaded and unloaded in non-designated areas including the middle of roads; idled beyond the 3-minute limit in Washington, DC and talked on cell phones while driving. Notably, the drivers were all very experienced at navigating Washington, DC and aware of the regulations. They appeared to violate the rules knowingly and strategically with a clear sense of how far they could push the limits without receiving a driving citation.

Cruising

Cruising occurs when a driver elects to drive the bus empty rather than search for a place to park or is forced to drive the bus empty because no parking is available or convenient. While not illegal, tour bus cruising contributes to vehicle emissions and traffic congestion. Cruising miles while in Washington, DC varied between 2.3 miles on the low end and 22 miles on the high end. Drivers indicated the impracticality of looking for parking in remote locations. For example, the drivers for the cultural groups explained that their participants stopped for such short periods of time that it was not feasible to seek offsite parking. Additionally, group leaders on many of the tours contributed to cruising in that they frequently asked the driver to stay close to the loading/unloading area so that wait times would be minimized.

Drivers' Concerns

The tour bus drivers expressed concerns about parking, traffic conditions, loading/unloading areas, law enforcement and safety. Most complaints were specific to parking, giving the sense that the other issues would diminish if parking locations were readily accessible and free. They were cognizant of parking spaces that had been taken away, particularly at Hains Point, and generally did not see remote parking as a solution. While there was some use of humor to downplay the problems, frustration was frequently evidenced. As an exception to the general distaste of driving in Washington, DC, one driver indicated a desire to be selected for Washington, DC tours. He explained his request to be a frequent driver for Honor Flight tours by stating, "Listen...I am a vet. I owe it to these guys. The first time I did it, it was just random. After one trip I told them to sign me up for as many as possible."

Tour Leaders' Concerns

Tour leaders' concerns revolved around staying on schedule and safety. Tour leaders were often unhappy with delays and they at times worried that a driver's specific behaviors might jeopardize the safety of the group. Notably, there was occasionally a sense that they questioned the drivers' commitment to the task. A tour manager for school groups explained that out of hundreds of drivers in their company, only one likes coming to Washington, DC. At the same time, it was clear that the tour leaders were looking out for

the drivers, as they echoed the drivers' sentiments regarding congestion and enforcement. When considering the cultural groups visiting from South Korea, a tour leader's comments implied concerns regarding their clients' overall engagement with Washington, DC as a destination. The leader explained that Washington, DC is not an attractive destination to most Korean tour groups, who often find it boring. Most Korean group tourists are more fascinated by natural places like Niagara Falls or the Grand Canyons. That is why this company limits the time spent in Washington, DC to a half day.

Problems Encountered

Each of the tours encountered some measure of difficulty. Delays were common as was convenient access to tour bus loading/unloading areas. An unaccounted for marathon event prohibited access to a desired site for a group and necessitated the reorganization of the itinerary. Weather played a role in several of the tours, with heat leading to heightened levels of exhaustion on several tours while a torrential downpour resulted in a quick itinerary change for one group. The most significant issue pertained to a broken down bus, requiring the tour bus company to scramble for a replacement vehicle.

TABLE B: OVERVIEW OF TOURS

Variable	School Age 1 3/22/13	School Age 2 6/13/13	Adult 1 4/11/13	Adult 2 5/2/14	Cultural 1 1/13/14	Cultural 2 4/27/14	Honor Flight 1 06/1/13	Honor Flight 2 09/14/13
Group Origin	South Dakota	Massachusetts	Virginia	North Carolina	South Korea	South Korea	Various U.S. locations. Many transported from Honor Flight hubs.	Various U.S. locations. Many transported from Honor Flight hubs.
Day of Week*	Friday	Thursday	Thursday	Friday	Monday	Sunday	Saturday	Saturday
Tour Season	Early peak	Peak	Peak	Peak	Off-peak	Peak	Peak	Off-peak
Temp. Low (°F)	33°	71°	57°	55°	32°	50°	72°	56°
Temp. High (°F)	59°	90°	86°	72°	61°	70°	91°	73°
Weather	Clear, windy, cold	Cloudy, hot and heavy rain for part of the trip	Sunny, warm, light breeze	Sunny, mild	Partly sunny, cool	Sunny, mild	Sunny, hot	Sunny, mild
Tour Start Time	7:16 am	7:14 am	8:06 am	7:57 am	12:42 pm	11:55 am	8:01 am	7:30 am
Tour End Time	8:41 pm	9:23 pm	5:14 pm	10:04 pm	5:00 pm	5:00 pm	8:10 pm	8:00 pm
Total Tour Hours / Minutes	13 hr 25 min	14 hr 9 min	9 hr 8 min	14 hr 7 min	4 hr 18 min	5 hr 5 min	12 hr 9 min	12 hr 30 min
Bus Style	Private Large	Private Large	Private Large	Private Large	Private Large for first two hours. Changed to Private Medium due to mechanical problems with first bus.	Private Large	Private Large	Private Large (2 buses)
Professional Guide with Tour?	Yes	Yes	No	Yes	Yes	Yes	No	No
Total Number of People on Tour	15	41	23	31	19	12	52	54 (Bus 1) 55 (Bus 2)
Number of Preteens (Ages 0–12)	0	0	0	0	0	1	2	0 (Bus 1) 0 (Bus 2)
Number of Teens (Ages 13–18)	13	37	0	2	5	0	0	1 (Bus 1) 0 (Bus 2)
Number of Adults (Ages 19–59)	2	4	1	4	14	9	20	9 (Bus 1) 20 (Bus 2)
Number of Seniors (Ages 60+)	0	0	22	25	0	2	30	45 (Bus 1) 35 (Bus 2)
Group Members Using Assistive Devices	0	0	1	0	0	0	15	30 (Bus 1) 20 (Bus 2)

Variable	School Age 1 3/22/13	School Age 2 6/13/13	Adult 1 4/11/13	Adult 2 5/2/14	Cultural 1 1/13/14	Cultural 2 4/27/14	Honor Flight 1 06/1/13	Honor Flight 2 09/14/13
Types of Assistive Devices	n/a	n/a	Wheel-chair	n/a	n/a	n/a	Wheelchairs, walkers and canes	Wheelchairs, walkers and canes
Total Vehicle Miles Traveled	92.7	63	15	98.8	45.4	17.6	91.5	112
Cruising Vehicle Miles in DC	22	6	5.5	12.5	1.5	3	8	2.3
Pedestrian Miles Traveled	9.72	6.76	3.8	6.26	2.0	2.1	2.8	2.17
Average Calories Burned	2233	2079	1288	2035	600	715	1518	1463
Number of Stops Made by Driver**	14	19	6	19	7	11	15	12
Number of Sites Visited by Passengers ***	7	9	6	9	5	6	9	9

* School groups and adult groups had multi-day itineraries in Washington, DC. The information provided is illustrative of one full day of the overall tour.

** Including parking locations and meals.

***Excluding parking locations and meals. Multiple sites in one stop counted separately.

TABLE C: SITES VISITED

DC Destination	School Age 1 3/22/13	School Age 2 6/13/13	Adult 1 4/11/13	Adult 2 5/2/14	Cultural 1 1/13/14	Cultural 2 4/27/14	Honor Flight 1 06/1/13	Honor Flight 2 09/14/13
Arlington National Cemetery	X	X					X	X
Franklin Delano Roosevelt Memorial				X				
Hillwood Estate, Museum & Gardens			X					
Iwo Jima/ U.S.M.C. War Memorial		X		X			X	X
Korean War Veterans Memorial	X	X		X	X	X	X	X
Lincoln Memorial	X	X		X	X	X	X	X
Martin Luther King, Jr. Memorial		X						
Mount Vernon		X						
National Museum of Natural History		X			X	X		
Royal Embassy of Saudi Arabia			X					
The White House				X	X	X		
Thomas Jefferson Memorial				X		X		
U.S. Air Force Memorial							X	X
U.S. Capitol	X	X	X	X	X	X		
U.S. Holocaust Memorial Museum	X							
U.S. Library of Congress	X		X					
U.S. National Archives	X							
U.S. Navy Memorial							X	X
Vietnam Veterans		X		X			X	X

DC Destination	School Age 1 3/22/13	School Age 2 6/13/13	Adult 1 4/11/13	Adult 2 5/2/14	Cultural 1 1/13/14	Cultural 2 4/27/14	Honor Flight 1 06/1/13	Honor Flight 2 09/14/13
Memorial								
Washington National Cathedral			X					
Women in Military Service for America Memorial							X	X
World War II Memorial				X			X	X

CONTENTS

1. Introduction and Background.....	1
2. Methods	2
2.1. Data Collection	2
2.2. On-Bus Instruments	2
2.3. Data Collection: Training and Implementation	3
2.4. Data Analysis	4
3. Results.....	5
3.1. School Group 1 — Friday, March 22, 2013	5
3.1.1. Overview.....	5
3.1.2. Documented Activities, Site Assessment, Researcher Observations and Overheard Commentary	5
3.1.3. Photographic Documentation (School Group 1)	11
3.2. School Group 2 — Thursday, June 13, 2013	12
3.2.1. Overview.....	12
3.2.2. Documented Activities, Site Assessment, Researcher Observations, and Overheard Commentary	12
3.3. Adult Group 1 — Thursday, April 11, 2013.....	18
3.3.1. Overview.....	18
3.3.2. Documented Activities, Site Assessment, Researcher Observations, and Overheard Commentary	18
3.4. Adult Group 2 — Friday, May 2, 2014	21
3.4.1. Overview.....	21
3.4.2. Documented Activities, Site Assessment, Researcher Observations, and Overheard Commentary	21
3.4.3. Photographic Documentation.....	27
3.5. Cultural Group 1 — Monday, January 13, 2014	33
3.5.1. Overview.....	33
3.5.2. Documented Activities, Site Assessment, Researcher Observations and Overheard Commentary	33
3.6. Cultural Group 2 — Sunday, April 27, 2014.....	37
3.6.1. Overview.....	37
3.6.2. Documented Activities, Site Assessment, Researcher Observations and Overheard Commentary	37
3.6.3. Photographic Documentation.....	41
3.7. Honor Flight Group 1 — Saturday, June 1, 2013.....	42
3.7.1. Overview.....	42
3.7.2. Documented Activities, Site Assessment, Researcher Observations and Overheard Commentary	42
3.7.3. Photographic Documentation.....	48
3.8. Honor Flight Group 2 — Saturday, September 14, 2013.....	50
3.8.1. Overview.....	50
3.8.2. Documented Activities, Site Assessment, Researcher Observations and Overheard Commentary	51
3.8.3. Photographic Documentation.....	54
Appendix A: On-Vehicle Cover Sheet	55
Appendix B: Activity Sheet	57
Appendix C: Overheard Commentary Sheet	59
Appendix D: Photolog	60

FIGURES

Figure 3.1: Tour Route — School Group 1, Friday, March 22, 2013	10
Figure 3.2: Tour Route — School Group 2, Thursday, June 13, 2013.....	17
Figure 3.3: Tour Route — Adult Group 1, Thursday, April 11, 2013	20
Figure 3.4: Tour Route — Adult Group 2, Friday, May 2, 2014	26
Figure 3.5: Tour Stops — Cultural Group 1, Monday, January 13, 2014	36
Figure 3.6: Tour Stops — Cultural Group 2, Sunday, April 27, 2014.....	40
Figure 3.7: Tour Route — Honor Flight 1, Saturday, June 1, 2013.....	47
Figure 3.8: Tour Route — Honor Flight 2, Saturday, September 14, 2013.....	53

TABLES

Table 2.1: Data Collection Schedule	2
Table 3.1: School Group 1 — Documented Activities, Site Assessment / Observations, Comments.....	5
Table 3.2: School Group 2 — Documented Activities, Site Assessment / Observations, Comments.....	12
Table 3.3: Adult Group 1 — Documented Activities, Site Assessment / Observations, Comments	18
Table 3.4: Adult Group 2 — Documented Activities, Site Assessment / Observations, Comments	21
Table 3.5: Cultural Group 1 — Documented Activities, Site Assessment / Observations, Comments ...	33
Table 3.6: School Group 2 — Documented Activities, Site Assessment / Observations, Comments.....	37
Table 3.7: Honor Flight Group 1 — Documented Activities, Site Assessment / Observations, Comments	42
Table 3.8: Honor Flight Group 2 — Documented Activities, Site Assessment / Observations, Comments	51

PHOTOS

Photo 3.1: Parking on Ohio Dr. in the morning.....	11
Photo 3.2: Professional tour guide	27
Photo 3.3: Segway tours	27
Photo 3.4: Medical personnel response at U.S. Capitol.	28
Photo 3.5: Timed entry ticket for U.S. Capitol Tour.....	28
Photo 3.6: Multi-generational representation on tour	29
Photo 3.7: Restoration project at U.S. Capitol.....	29
Photo 3.8: Over 1,300 breaks being repaired in U.S. Capitol dome	30
Photo 3.9: U.S. Capitol guide	30
Photo 3.10: Spring landscaping and views.....	31
Photo 3.11: Recycling containers and trash containers.....	32
Photo 3.12: Night tour	32
Photo 3.13: Double parked buses for loading and unloading.....	41
Photo 3.14: Roadside unloading.....	41
Photo 3.15: Veterans being honored at the World War II Memorial	48
Photo 3.16: Youngest honor flight tour member reminding visitors about silence and respect.....	48
Photo 3.17: “He is not just my father. He is my hero and my friend.”	49
Photo 3.18: The one female veteran on tour with her assistant.....	49
Photo 3.19: Group photo at the U.S. Air Force Memorial	50
Photo 3.20: Bus unloaded and loaded in a non-designated zone by the U.S. Navy Memorial.	54
Photo 3.21: Excellent turnaround and parking at the U.S. Air Force Memorial.	54

1. INTRODUCTION AND BACKGROUND

The National Park Service/National Mall and Memorial Parks (NPS/NAMA) management team completed a plan entitled the *National Mall Plan / Environmental Impact Statement (2010)* to provide a long-term management framework for the future of NAMA. As part of the larger plan, conditions pertaining to access and circulation were highlighted. The *National Mall Plan* proposed numerous recommendations in light of tour bus operations, including but not limited to: loading and unloading locations; parking; the management of large groups arriving by tour bus; creating multilingual educational opportunities for culturally diverse groups that arrive by tour bus; ready access to refreshments for tour bus arrivals and departures at select locations; information provision; and sustainable practices.

The background for the 2010 recommendations included findings from a 2003 study entitled the *District of Columbia Tour Bus Management Initiative* that was conducted by the Volpe National Transportation Systems Center for the District of Columbia Department of Transportation and other key stakeholders. The 2003 study highlighted numerous problems associated with tour bus operations in the District of Columbia, including traffic congestion, residential neighborhood disruption, air pollution, excessive noise, obstruction of view corridors and major landmarks and negative impacts on local infrastructure. The 2003 study recommended specific changes as well as on-site data collection and counts for monitoring purposes. However, the concerns raised and recommendations set forth in the *National Mall Plan*, completed in 2010, suggested that little progress had been made in the interim period.

In 2011, NPS contracted with researchers at George Mason University (GMU) to conduct a scoping study to determine the perceptions of the current state of tour bus operations in Washington, DC from key stakeholders. The study was conducted to confirm perceptions of current tour bus operations, in general, and specifically to determine the constraints to making improvements to current tour bus operations in and around NAMA.

The GMU research team worked collaboratively with NPS to identify agencies for participation in the scoping interviews. Feedback was also received through meetings, e-mail communication and webinar participation. The following stakeholders were represented in the 2011 study: Academy Bus / New World Tours, Destination DC, DDOT, Guild of Professional Tour Guides, National Tour Association, United Motorcoach Association, U.S. Capitol Police, U.S. Park Police and the U.S. Travel Association. The primary goal of the scoping questions was to determine perceptions of the progress that has been made in terms of addressing the problems identified and the recommendations made in the 2003 study. Results from operators indicated perceptions of little progress, with an overall sense of increased enforcement being accompanied by a decrease in available parking, resulting in increased congestion and cruising. A disconnect between operator and enforcement personnel was evidenced, with operators indicating that parking and loading spaces near key NAMA visitor sites are inadequate for current demand while enforcement agencies indicated concerns regarding a lack of knowledge of and/or unwillingness to use available sites.

The current study builds upon the background knowledge provided in the 2003, 2010 and 2011 reports by beginning the process of systematically documenting existing conditions related to tour bus operations. This is the fifth phase of the seven-phase study that will ultimately be integrated into a comprehensive plan of action for short-term and long-term improvements in tour bus operational efficiency within NAMA.

The current report summarizes Phase V findings, specific to on-bus data collection and documentation of daily bus operations. Acronyms that will be used throughout the report include those for the National Park Service (NPS), George Mason University (GMU), District Department of Transportation (DDOT), Metropolitan Washington Council of Governments (COG), and American Bus Association (ABA).

2. METHODS

2.1 DATA COLLECTION

Eight days of on-bus observational data were collected using four standardized instruments to systematically document information specific to group activities, congestion, operational efficiency, mobility, access and safety. Four target groups included school, adult, cultural and Honor Flight veterans. Researchers coordinated with NPS, Destination DC and specific tour bus companies to join the school, adult and cultural groups. In accessing veterans, the research team partnered with the Honor Flight Network, “a non-profit organization created solely to honor America’s veterans for all their sacrifices. We transport our heroes to Washington, D.C. to visit and reflect at **their** memorials. Top priority is given to the senior veterans – World War II survivors, along with those other veterans who may be terminally ill” (<http://www.honorflight.org/>). Veterans often travel with family members or are assigned a “Guardian.” As explained at <http://www.honorflight.org/>, “Guardians are essential to the success of the Honor Flight Network Program. Without these volunteers we would not be able to carry out the dreams of so many veterans, enabling them to see the memorials built in their honor.

Typically during our trips, we divide the veterans into groups of eight and assign three guardians to each group. Even before the veterans arrive at the airport, the guardian's responsibilities begin with flight preparation and going over their packets of material. Once the veterans start to arrive, guardians will ensure boarding passes and IDs are available, distribute Honor Flight Network tee shirts, get the veterans through security and to the gate, assist in boarding, etc. From the moment the veterans are in our hands until we return them to their loved ones in the evening, guardians will be asked to treat these heroes as if they are family and ensure that every veteran has a safe, memorable, and rewarding experience. Guardians are volunteers and are expected to pay for their trip. Prices will vary depending on the departure city and airline fares.”

Table 2.1 indicates the data collection dates and associated target groups. Although the School groups and adult groups had multi-day itineraries in Washington, DC, the research team joined the tour for one full day. Researchers collaborated with tour representatives to join these groups on full tour days, meaning that the dates selected did not coincide with arrival or departure.

TABLE 2.1: DATA COLLECTION SCHEDULE

Tour	Group	Data Collection Date
1	School 1	Friday, March 22, 2013
2	Adult 1	Thursday, April 11, 2013
3	Honor Flight 1	Saturday, June 1, 2013
4	School 2	Thursday, June 13, 2013
5	Honor Flight 2	Saturday, September 14, 2013
6	Cultural 1	Monday, January 13, 2014
7	Cultural 2	Sunday, April 27, 2014
8	Adult 2	Friday, May 2, 2014

2.2 ON-BUS INSTRUMENTS

The on-bus instruments were constructed with significant input from NPS, DDOT and Destination DC. All instruments were designed using iSurvey software and administered through up to four iPads for each tour. Map My Tracks software was utilized to document the driving route taken by the bus as well as the walking route taken by participants while off the bus. Select tours included walking data collected using Fitbit activity trackers to validate Map My Tracks information. An iPad tracking the bus movement was kept on the bus at all times, so that the full route selected by the driver could be mapped. At least one

researcher stayed on the bus at all times in order to document the day through the experiences of the driver.

The first instrument was an on-vehicle cover sheet (appendix A) designed to allow the researchers to document their personal characteristics as well as specifics of the tour and the group. The cover sheet was completed at the beginning of the tour by each researcher. Personal characteristics including each researcher's height, weight, age and sex were needed to normalize health benefits data specific to calories burned during the excursion. Tour and group variables pertained to date, day of week, tour start time, tour start location, temperature, weather conditions, bus style, bus company, DOT number, last three digits of license plate, name of group or primary affiliation, the presence or absence of a professional guide, number of group leaders, group type (school, adult, cultural, Honor Flight), number of individuals in each of four age groups (pre-teen, teen, adult, senior), number of group members using an assistive device, types of assistive devices being utilized and an indication of languages other than English spoken by members in the group.

The second instrument was an activity sheet used throughout the tour to pinpoint the specific locations visited and sites visited by the group members (appendix B). Activity sheets were completed on the iPads for each time the bus unloaded, loaded, parked, was in transit, while cruising empty and during off-bus periods. One analyst stayed with the bus while other analysts unloaded with the tour bus passengers and completed activities with the group. Variables included activity start time, bus activity, start point, traffic congestion level (if in motion), cause of congestion (if applicable), observed operational issues, passenger loading/unloading behaviors, place assessment, passenger off-bus activity, distance walked during off-bus activity, calories burned during off-bus activity, end time, end point and comments.

The third instrument allowed researchers to summarize relevant overheard commentary from group members (appendix C). Variables included time, whether the speaker was on or off the bus when the comment was made, who made the comment (i.e., driver, passenger, group leader, tour guide, NPS Ranger, or other individual), approximate location, comment theme and a summary of the comment content. Researchers did not pose questions to passengers at any time or eavesdrop on conversations; as such, documenting overheard commentary was optional and only noted as applicable to the study.

The final instrument was a photolog (appendix D) where researchers captured a relevant image that was time stamped. They then added comments regarding the location and why they took the picture. Photographic evidence was optional and only captured as deemed relevant by the researchers on each given tour.

2.3 DATA COLLECTION: TRAINING AND IMPLEMENTATION

All researchers went through a 1-hour offsite training session to become familiar with the instruments and protocol. Researchers did not wear any NPS identifiers on their clothing and were instructed to simply blend in with the tour as participant observers. For each tour, the bus driver and all tour participants were introduced to the researchers and informed of the study purpose.

Because iSurvey software does not permit the researcher to toggle between instruments until an open instrument is completed, multiple analysts were needed for on-bus data collection. A minimum of two researchers joined each tour. Researchers would periodically switch tasks throughout the day to decrease data entry fatigue. Due to the nature of the data collection, with researchers acting as participant-observers, tour documentation was subject to variability based on the individual experiences and accounts of the researchers. The use of standardized instruments, multiple analysts and task switching aided in data collection breadth and consistency.

2.4 DATA ANALYSIS

Data were organized and analyzed using Microsoft Excel software. Spatial data files were converted into Arc GIS format for analysis. Each data point was geocoded by zone before creating graphical illustrations of each key variable. Google Earth and Street View technologies were utilized to better understand the spatial makeup of the tour routes.

3. RESULTS

3.1 SCHOOL GROUP 1 — FRIDAY, MARCH 22, 2013

3.1.1 Overview

School Group 1 was comprised of 13 high school seniors visiting from South Dakota with two adults supervising. The capacity of tour bus was significantly underutilized, with 41 seats on the bus, but only 15 people in the group. The weather on March 22, 2013 was cool and sunny. The school group was quiet and well behaved and the group leader was engaged throughout. Commentary regarding the tour from the student participants was minimal as they were actively engaged in topics unrelated to the experience. The driver engaged in a number of illegal/unauthorized activities, such as loading/unloading in non-designated loading/unloading zones, talking on cell phone while driving, unloading/loading on roadside (rather than curbside) and double parking. On occasion this compromised/threatened the safety of the group. With the exception of the Holocaust Museum, parking was a problem. Consequently, the driver often had to cruise around (with an empty bus) while the group was sightseeing. Multiple attempts at finding parking at designated Ohio Drive and Hains Point locations were unsuccessful due to capacity issues. The driver complained about the cost and availability of parking, particularly around the U.S. Capitol. The driver indicated distance as a limiting factor for utilizing parking at RFK stadium. The group leader was agitated by delays and concerned about the safety of the students in the group. The group leader was requesting the bus driver stay as “close as possible” to the tour group to prevent delays when picking up, as pickups were usually requested via cell phone requests. This request was not always achievable as local parking opportunities were unavailable in most cases. Most of the sites visited on this tour had trash containers and recycling bins and meals were eaten at a hotel (breakfast), food court (lunch) and shopping mall (dinner). Hence, littering was not an issue. Directional and educational signs were consistently noted. The tour route was a total of 92.7 driving miles with participants walking 9.72 pedestrian miles (Figure 3.1).

3.1.2 Documented Activities, Site Assessment, Researcher Observations and Overheard Commentary

TABLE 3.1: SCHOOL GROUP 1 — DOCUMENTED ACTIVITIES, SITE ASSESSMENT / OBSERVATIONS, COMMENTS

School Group 1 — Friday, March 22, 2013 (15 Participants from South Dakota)			
Location / Activity	Start – End Time (Duration)	Site Assessment / Researcher Observations	Overheard Commentary: Speaker / Theme (Time) Comment Summary
Tyson’s Westpark Hotel / Pre-loading	7:16 am –7:30 am (14 min)	Traffic was moderately congested. Tour bus was double-parked. Soil was compacted and group stood on it rather than using walkways, which seems to be a common problem. Waysides and trash containers were present outside the hotel. Group photo was taken.	Pre-Boarding: Driver/Traffic Conditions (7:05 am)
Tyson’s Westpark Hotel / Loading	7:31am – 7:51 am (20 min)	Traffic was not all congested (i.e., free flowing). Loading was orderly.	
Tyson’s Westpark Hotel / In Transit	7:52 am –8:32 am (50 min)	Tour bus was <i>en route</i> to the Capitol Building. Traffic congestion was moderate to heavy. Driver was talking/texting on cellular phone (Bluetooth device) while driving.	

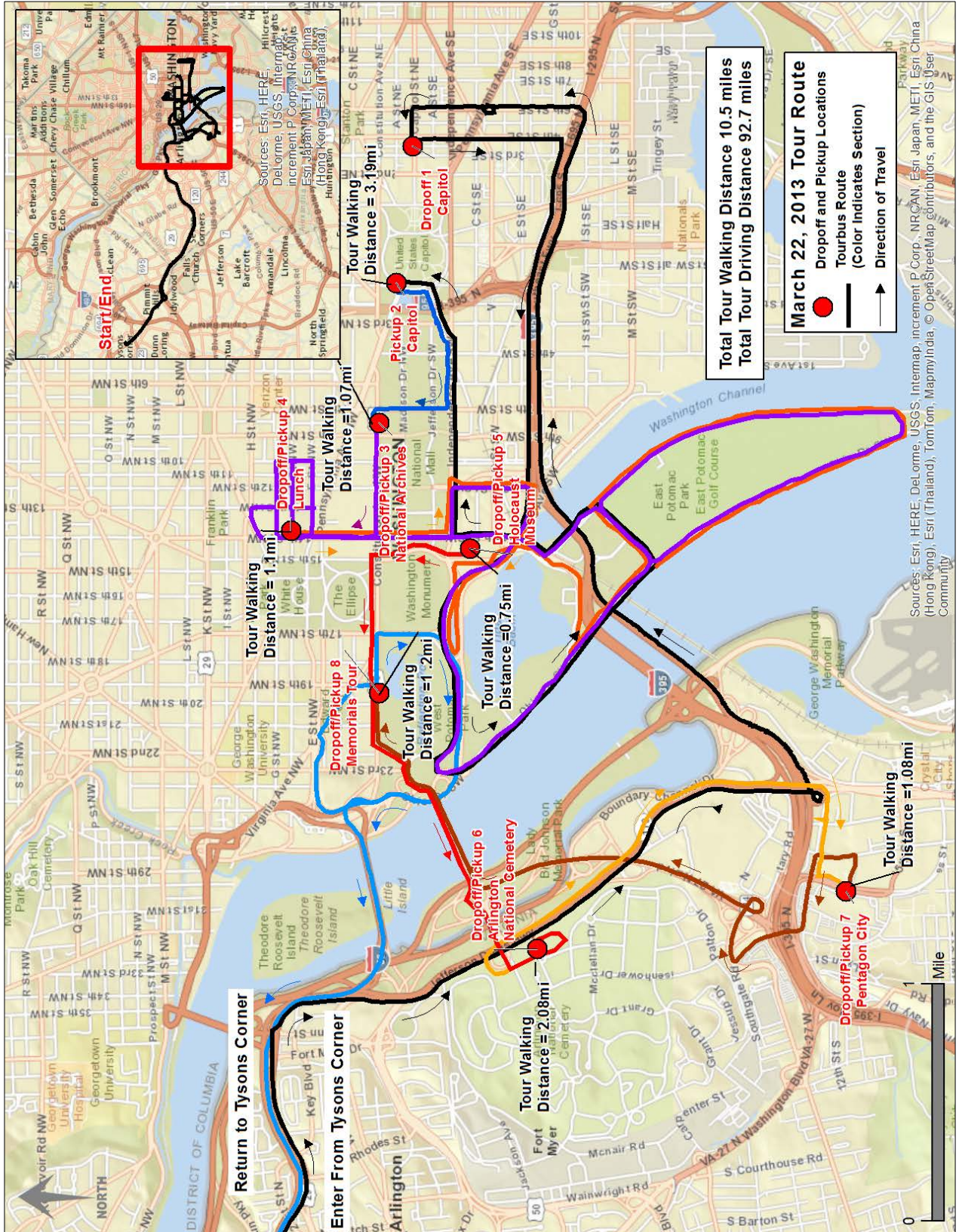
School Group 1 — Friday, March 22, 2013 (15 Participants from South Dakota)			
Location / Activity	Start – End Time (Duration)	Site Assessment / Researcher Observations	Overheard Commentary: Speaker / Theme (Time) Comment Summary
		Directional signage was observed while in-transit.	
U.S. Capitol / Unloading (See Figure 3.1: Dropoff 1)	8:33 am – 8:39 am (6 min)	Directional signage (e.g., way-finding) and trash containers present where the group unloaded. Group was engaged in general sightseeing. Traffic was free-flowing; however, there was no parking available around the U.S. Capitol. Unloaded east of U.S. Capitol.	
U.S. Capitol / Tour and Sightseeing	8:39 am – 10:20 am (2 hours 29 min)	Trash containers, recycling containers, and directional signage were present in and around the Capitol Building. The group took photos, viewed an informational film and participated in an educational tour. Weather conditions were cold and windy.	
Library of Congress / Program	10:26 am – 11:02 am (36 min)	Site program at Library of Congress.	
Cruising (Empty)	8:39 am – 11:08 am (2 hours 29 min)	Empty tour bus cruised around the area. Traffic was moderately congested. At one point, the tour bus parked along right side of Ohio Dr.	Driver/Parking (9:08 am) "We used to be able to Park at Union Station but they increased rates from 20 to 50 dollars and decreased spaces by 1/4 and now a tour bus needs a reservation, East Potomac Park was also another good option but there are only 8 spots." & Driver/Parking (9:12 am) "RFK stadium is too far of a drive to park after dropping off at east Capitol street. It seems like RFK is closer than Ohio Drive, but upon pickup this would be harder to get to pickup location." Driver/Parking (9:58 am) "If parking were available along Ohio Drive in East Potomac Park, I would use it as alternative to Ohio Drive or when Ohio Drive is full."
1st St. at U.S. Capitol / Loading (See Figure 3.1: Pickup 2)	11:08 am – 11:16 am (8 min)	Tour group had to wait for the bus for more than five minutes. Driver utilized loading area on west side of U.S. Capitol. Traffic was moderately congested. There were several buses at the location waiting to pick up passengers. Loading was orderly and there were no idle buses. Trash containers, waysides and directional signage were present. The tour took some group photos.	
In Transit	11:14 am – 11:24 min (8 min)	Bus was <i>en route</i> to National Archives. Traffic was not at all congested.	Tour Guide/Accessibility (11:22 am) Talking to driver one of the tour guides said: "Stay close if you can."
National Archives / Unloading (See Figure 3.1: Dropoff/Pickup 3)	11:25 am – 11:36 am (11 min)	Group was dropped off on Constitution Ave. at National Archives. Traffic was free-flowing. Driver was talking/	

School Group 1 — Friday, March 22, 2013 (15 Participants from South Dakota)			
Location / Activity	Start – End Time (Duration)	Site Assessment / Researcher Observations	Overheard Commentary: Speaker / Theme (Time) Comment Summary
		texting on cellular phone. Trash containers, recycling containers, directional signage were present outside the National Archives. National Park Service ranger was also observed at the site. Tour bus was double-parked.	
National Archives / Program and Sightseeing	11:36 am – 12:04 pm (28 min)	Group took part in a site program and general sightseeing at the National Archives.	
Cruising (Empty)	11:36 am – 12:14 pm (38 min)	Empty tour bus cruised around for a while.	
National Archives / Loading (See Figure 3.1: Dropoff/Pickup 3)	12:05 pm – 12:20 pm (15 min)	Group had to wait for bus for more than 10 minutes and was not very talkative. Traffic was not all congested. Double-parking and unloading/loading on the roadside, rather than the curbside were observed. Special police/ security were present outside the building.	
In Transit	12:21 pm – 12:30 pm (9 min)	Tour bus was <i>en route</i> to National Place for lunch. Traffic was moderately congested.	
National Place / Cruising (Empty)	12:24 pm – 12:56 pm (32 min)	There was moderate to heavy traffic congestion. Tour bus could not find parking, so unloaded roadside and participants were walking on the street. Other tour bus unloading/loading on the roadside was observed. Driver was talking/texting on cellular phone. The driver had to circle around the block for about 30 minutes.	
F St. & 13th St. / Lunch at Food Court, National Place (See Figure 3.1: Dropoff/Pickup 4)	12:25 pm – 1:02 pm (37 min)	The group had lunch at the food court. The food court was very busy. Trash containers, recycling containers and directional signage were present at the site.	
F St. and 13 th St., National Place / Loading (See Figure 3.1: Dropoff/Pickup 4)	12:52 pm – 1:06 pm (14 min)	Traffic was very heavy. Bus wasn't able to find parking nearby causing a 15 minute delay in loading.	Tour guide was unhappy with the delay of bus.
F St. and 13 th St./ In Transit	1:07 pm – 1:15 pm (8 min)	Tour bus was <i>en route</i> to the Holocaust Museum. Traffic was free-flow. There was a bus blocking pedestrian walkway. The group was snacking while in-transit.	
U.S. Holocaust Memorial Museum / Unloading and Sightseeing	1:15 pm – 2:52 pm (1 hr 37 min)	Traffic was not all congested. Trash containers, waysides and directional signage were present outside of the U.S. Holocaust	

School Group 1 — Friday, March 22, 2013 (15 Participants from South Dakota)			
Location / Activity	Start – End Time (Duration)	Site Assessment / Researcher Observations	Overheard Commentary: Speaker / Theme (Time) Comment Summary
(See Figure 3.1: Dropoff/Pickup 5)		Memorial Museum.	
Cruising (Empty)	1:19 pm – 1:40 pm (21 min)	Traffic was not all congested. East Potomac Park was full of tour/school buses. Parking location was close to the Holocaust Museum.	
East Potomac Park (Ohio Dr.) / Cruising (Empty)	2:45 pm – 2:52 pm (7 min)	Traffic was not at all congested.	
U.S. Holocaust Memorial Museum / Loading (See Figure 3.1: Dropoff/Pickup 5)	2:53 pm – 3:02 pm (9 min)	Traffic was not at all congested. Loading was orderly. Directional signage was present at the site.	
In Transit	3:02 pm – 3:12 pm (10 min)	Tour bus was <i>en route</i> to Arlington National Cemetery. Traffic was moderately congested.	
Arlington National Cemetery / Unloading (See Figure 3.1: Dropoff/Pickup 6)	3:13 pm – 3:15 pm (2 min)	Traffic in general was free-flow, however there were a lot of tour busses entering and exiting the site. Driver could not find any immediate parking. Group was dropped off in middle of parking lot. Directional signage present at the site. Several violations were noted: unloading/loading in a non-designated loading zone, unloading/loading on the roadside (rather than the curbside), and unsafe passenger loading/unloading. The group was engaged in general sightseeing.	
Arlington National Cemetery / Parked, Sightseeing	3:16 pm – 5:28 pm (2 hours 12 min)	Interpretive signage (e.g., wayside, educational), directional signage, trash containers were observed at the site. Guard ceremony was taking place. Tour took group photos, engaged in general sightseeing, and watched the changing of the guard and wreath laying.	
Arlington National Cemetery / Loading (See Figure 3.1: Dropoff/Pickup 7)	5:32 pm – 5:33 pm (1 min)	Traffic was not at all congested. Loading was orderly.	
In Transit	5:34 pm – 5:41 pm (7 min)	Tour bus in transit to Pentagon City Mall. Traffic was not at all congested.	

School Group 1 — Friday, March 22, 2013 (15 Participants from South Dakota)			
Location / Activity	Start – End Time (Duration)	Site Assessment / Researcher Observations	Overheard Commentary: Speaker / Theme (Time) Comment Summary
Pentagon City Mall / Parked and Dinner	5:41 pm – 6:46 pm (1 hour 5 min)	The group stopped to eat dinner at Pentagon City Mall. Directional signage, trash containers, and directional signage were present at the site. Traffic was free flowing. Tour buses were double-parked and unloading/loading on the roadside.	
Pentagon City Mall / Loading (See Figure 3.1: Dropoff/Pickup 7)	6:46 pm – 6:47 pm (1 min)	Traffic was free-flowing.	
Pentagon City Mall / In Transit	6:46 pm – 6:56 pm (10 min)	Traffic was minimally congested. The tour bus was in transit to the memorials.	
Constitution St. at Lincoln Memorial / Unloading (See Figure 3.1: Dropoff/Pickup 8)	7:00 pm – 7:04 pm (4 min)	Tour bus unloaded in an unauthorized unloading/loading zone. Traffic was not at all congested. Trash containers, recycling containers and directional signage observed around the Lincoln Memorial.	
Lincoln Memorial and Korean War Veterans Memorial / Sightseeing	7:05 pm – 8:11 pm		
Cruising (Empty)	7:05 pm – 8:11 pm (1 hour 13 min)	Empty tour bus cruised around.	
Constitution St. at Lincoln Memorial / Loading (See Figure 3.1: Dropoff/Pickup 8)	8:12 pm – 8:13 pm (1 min)	Traffic was very congested. Several violations noted while loading the tour bus: unloading/loading in a non-designated loading, unloading/loading on the roadside and unsafe passenger unloading/loading.	
In Transit	8:13 pm – 8:41 pm (28 min)	Tour bus returned to the hotel. Traffic was not at all congested.	

FIGURE 3.1: TOUR ROUTE — SCHOOL GROUP 1, FRIDAY, MARCH 22, 2013



3.1.3 Photographic Documentation (School Group 1)

PHOTO 3.1: PARKING ON OHIO DR. IN THE MORNING



3.2 SCHOOL GROUP 2 — THURSDAY, JUNE 13, 2013

3.2.1 Overview

School Group 2 was comprised of middle school students visiting from Massachusetts. The weather was cloudy and hot with a period of heavy rain in the late afternoon that interfered with the itinerary. Most of the sites visited had trash containers, recycling bins and ample signage. The driver complained about law enforcement and how they were unfair to tour bus drivers. Parking was also raised as an issue. It was perceived by the driver to be a widespread problem in Washington, DC. Also, lack of adequate bus loading/unloading zones near sites appears to be a problem, for example, the group had to walk a significant distance to get from Mt. Vernon to the loading zone. Moreover, there was no bus loading/unloading zone outside the restaurant the group went to for dinner. This resulted in a chaotic scene when the bus was loading, including illegal activities on the part of the driver. The group leader was concerned about the safety of the group, and student tours in general. In particular, the lack of adequate lighting around the monuments was noted. Also, a general lack of information on rules and regulations at sites, such as whether or not beverages were allowed, was mentioned as an issue. The tour guides provided excellent educational commentary to the students regarding the history of the sites they were visiting. The tour route was a total of 63 driving miles with participants walking 6.76 pedestrian miles (Figure 3.2).

3.2.2 Documented Activities, Site Assessment, Researcher Observations, and Overheard Commentary

TABLE 3.2: SCHOOL GROUP 2 — DOCUMENTED ACTIVITIES, SITE ASSESSMENT / OBSERVATIONS, COMMENTS

School Group 2 — Thursday, June 13, 2013 (41 Participants from Massachusetts)			
Location / Activity	Start – End Time (Duration)	Site Assessment / Researcher Observations	Overheard Commentary: Speaker / Theme (Time) Comment Summary
Arlington Best Western Hotel / Loading	7:14 am – 7: 16 am (2 min)	The group loaded at the Arlington Best Western Hotel to go to breakfast. Traffic around the hotel was moderately congested. Trash containers present outside the hotel.	
Arlington Best Western Hotel / In Transit	7:10 am – 7:22 am (12 min)	There was road construction while in transit to Crystal City for breakfast; however this did not appear to cause any traffic problems. Bus stopped on roadside.	
Crystal City / Unloading (See Figure 3.2: Dropoff/Pickup 1)	7:23 am – 7:28 am (5 min)	Group unloaded for breakfast at Crystal City. Unloading was orderly. Traffic was moderately congested. Unloading/loading in a non-designated loading zone and unloading/loading on roadside were observed at the site. Trash containers, recycling containers, waysides and directional signage present outside the shops.	
Crystal City / Breakfast at Hamburger Hamlet	7:28 am – 8:15 am (47 min)		Tour Group Manager / Regulations & Enforcement (7:39 am) "Police ticketing is inconsistent, and just had a driver that received a \$500 that was originally issued as a \$100 but officer changed it to make it a \$500 ticket." Tour Group Manager / Accessibility (7:43 am). Out of his hundreds of drivers only one enjoys coming here and some tour companies refuse to even come to DC.

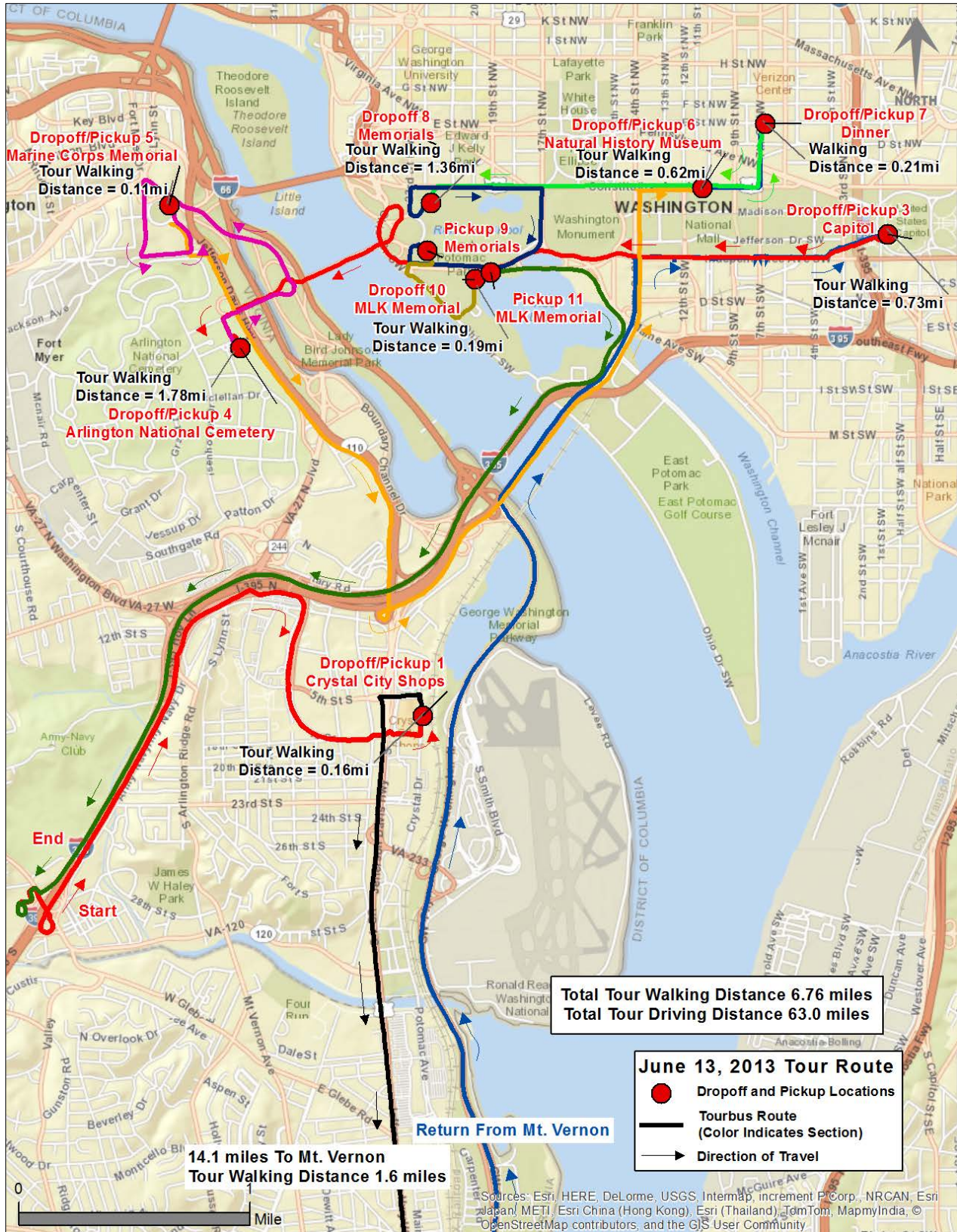
School Group 2 — Thursday, June 13, 2013 (41 Participants from Massachusetts)			
Location / Activity	Start – End Time (Duration)	Site Assessment / Researcher Observations	Overheard Commentary: Speaker / Theme (Time) Comment Summary
Crystal City Shops / Loading (See Figure 3.2: Dropoff/Pickup 1)	8:16 am – 8:17 am (1 min)	Traffic was not at all congested. Loading was orderly.	
Crystal City Shops / Hamburger Hamlet, In Transit	8:18 am – 8:53 am (35 min)	Tour bus was <i>en route</i> to Mt. Vernon. Traffic was not at all congested.	Tour Guide / Education (8:34 am) One of the guides spoke about City of Alexandria and George Washington while bus was in transit. Group Leader / Regulations/Enforcement (8:30 am) "Would be helpful if there was a published document about which monuments require searches and allow water and such." Group Leader / Safety and Security (8:31 am) "Hard to keep children together at monuments during night tours. Minimal lighting. Difficult to see."
Mount Vernon / Unloading (See Figure 3.2, arrow indicators)	8:54 am – 8:56 am (2 min)	Unloading at Mount Vernon was orderly. Trash containers and directional signage were observed at the site.	
Mount Vernon / Sightseeing	8:57 am – 11:45 am (2 hours 48 min)	Group was engaged in general sightseeing and participated in educational site program. The group had to stand in line to get into the house/museum.	
Mount Vernon / Loading, Unloading Zone, Cruising (Empty)	8:57 am – 9:15 am (18 min)	The driver went around the loop before parking. Bus was empty.	
Mount Vernon / Parked	9:16 am – 11:45 am (2 hr 29 min)	The bus driver sat on the bus and watched a video. Another bus driver came by to watch the video. Eventually both drivers took a nap on the bus. Group was eating and taking photos. Buses are only able to unload in front of the entrance and must load in bus parking area.	
Shops at Mount Vernon / Loading (See Figure 3.2, arrow indicators)	11:45 am – 11:47 am (2 min)	Traffic was not at all congested. Loading was orderly. Trash containers were observed at the loading site.	The group had to walk ½ mile to loading zone from Mt. Vernon.
In Transit	11:47 am – 12:19 pm (32 min)	Bus was <i>en route</i> to the U.S. Capitol. Traffic was not at all congested. Driver ran a red light. While in-transit, guide described history of the area.	Tour Guide/Education (12:15 pm) Tour guide talked about sites that we were seeing along the way.
U.S. Capitol / Unloading (See Figure 3.2: Dropoff/Pickup 3)	12:20 pm – 12:26 pm (6 min)	Bus unloaded in front of the U.S. Capitol. There were many buses present at the site. Unloading was orderly. Trash containers, recycling containers, waysides and directional signage were observed at the site. Tour took group photos. Police enforced the loading/unloading zone upon arrival.	

School Group 2 — Thursday, June 13, 2013 (41 Participants from Massachusetts)			
Location / Activity	Start – End Time (Duration)	Site Assessment / Researcher Observations	Overheard Commentary: Speaker / Theme (Time) Comment Summary
Cruising (Empty)	12:27 pm – 12:54 pm (27 min)	Driver cruised around with an empty bus while group was at Capitol building. Traffic was not at all congested.	
U.S. Capitol / Loading (See Figure 3.2: Dropoff/Pickup 3)	12:55 pm – 12:59 pm (4 min)	Group loaded on the tour bus.	
In Transit	12:59 pm – 1:13 pm (14 min)	Tour bus was <i>en route</i> to Arlington Cemetery. Traffic was moderately congested – i.e., it was normal for that time of day, however there was a lot of congestion in and around the loading zone. Double parking and unloading/loading on the roadside observed. The tour guides were talking while bus was in-transit.	
Arlington National Cemetery / Unloading (See Figure 3.2: Dropoff/Pickup 4)	1:13 pm – 1:18 pm (5 min)	Group unloaded at Arlington Cemetery.	
Arlington National Cemetery / Cruising (Empty), Parked	1:17 pm – 3:38 pm (2 hours 21 min)	Traffic was not at all congested. Tour bus idled for more than three minutes after parking in designated area. Driver moved to another designated area and idled again. Driver wandered around the site while the group was sightseeing.	
Arlington National Cemetery	1:17 pm – 3:38 pm (2 hours 21 min)	Group engaged in a site program and general sightseeing. Interpretative signage (e.g., wayside, educational), directional signage and trash containers present at the site.	Tour Guide/Recreation (2:05 pm) The tour guide informed the students about the behavior that they should have when at the Tomb of the Unknown Soldier.
Arlington National Cemetery / Loading (See Figure 3.2: Dropoff/Pickup 4)	3:36 pm – 3:39 pm (3 min)	Group was tired and pushy while boarding the bus.	All Drivers/Regulation and Enforcement (3:38 pm) Drivers talking outside of bus while clients loading complained about parking throughout DC. They feel that law enforcement tries to give them a hard time. More difficult to load and unload. Also complaints about how group keep changing the itinerary, without giving them a heads up. Added bike lanes took away from bus parking.
In Transit	3:40 pm – 3:50 pm (10 min)	Bus was in transit to Iwo Jima Memorial. Traffic was not at all congested. While bus was in-transit, the tour guide provided some information on the history of the area.	
Marine Corps War Memorial (i.e., Iwo Jima Memorial) / Unloading	3:51 pm – 3:54 pm (3 min)	Bus unloaded.	

School Group 2 — Thursday, June 13, 2013 (41 Participants from Massachusetts)			
Location / Activity	Start – End Time (Duration)	Site Assessment / Researcher Observations	Overheard Commentary: Speaker / Theme (Time) Comment Summary
(See Figure 3.2: Dropoff/Pickup 5)			
Marine Corps War Memorial (i.e., Iwo Jima Memorial) / Loading (See Figure 3.2: Dropoff/Pickup 5)	3:59 pm – 4:04 pm (5 min)	The group ran to the bus because it started to rain (torrential down-pour). Due to the rapid change in weather conditions, the group had to run to the bus and load quickly. Tour bus loaded on roadside (rather than curbside). Loading was unsafe. Scene was chaotic because of the rain.	
In Transit	4:05 pm – 4:17 pm (12 min)	Tour bus in transit to the National Museum of Natural History. Traffic was moderately congested.	Tour guide talked about sites along the way.
National Museum of Natural History / Unloading (See Figure 3.2: Dropoff/Pickup 6)	4:17 pm – 4:18 pm (1 min)	Unloading was orderly. Traffic was not at all congested. Trash containers and recycling bins observed outside Natural History Museum. Group was informed that they had an hour to look around the museum and get a snack if they wanted to.	
Cruising (Empty), Parked	4:18 pm -5:40 pm (1 hour 22 min)	Bus driver was trying to find a legal parking spot, as were other buses. Driver stopped in a loading/unloading zone beyond time limit allowed. Bus idled for more than three minutes. Traffic was moderately congested.	The tour bus driver talked about the general parking situation in Washington, DC and how it needs to be fixed.
National Museum of Natural History / Sightseeing	4:20 pm – 5:40 pm (1 hour 20 min)	Group was engaged in general sightseeing. Interpretive signage, directional signage, trash containers, and recycling bins observed inside the museum.	
National Museum of Natural History / Loading (See Figure 3.2: Dropoff/Pickup 6)	5:40 pm – 5:43 pm (3 min)	Tour bus loaded in a non-designated zone as loading zone was occupied by a valet. Event going on at the museum. Traffic was not at all congested.	
In Transit	5:44 pm – 5:47 pm (3 min)	Bus was in transit to dinner. Traffic was moderately congested.	
Hill Country BBQ / Unloading and Dining (See Figure 3.2: Dropoff/Pickup 7)	5:48 pm – 6:45 pm (57 min)	Unloading was orderly. Bus unloaded in a non-designated loading/unloading zone. Traffic was moderately congested. Trash containers and recycling bins were observed outside the restaurant.	
Hill Country BBQ / Loading (See Figure 3.2: Dropoff/Pickup 7)	6:46 pm – 6:48 pm (2 min)	The restaurant had no official bus loading zone so the driver had to park in the street. The vehicle blocked traffic. Traffic was moderately congested. Several violations observed: unloading/loading in a non-designated loading zone, unloading/loading on roadside and unsafe passenger loading/unloading. Scene was somewhat chaotic.	

School Group 2 — Thursday, June 13, 2013 (41 Participants from Massachusetts)			
Location / Activity	Start – End Time (Duration)	Site Assessment / Researcher Observations	Overheard Commentary: Speaker / Theme (Time) Comment Summary
In Transit	6:49 pm – 6:55 pm (6 min)	Bus was in-transit to Vietnam War Memorial. Traffic was not at all congested.	
Lincoln Memorial, Vietnam Veterans Memorial / Unloading (See Figure 3.2: Dropoff 8)	6:55 pm – 6:56 pm (1 min)	Unloading was orderly. Traffic was not at all congested. Trash containers, recycling bins, waysides and directional signage observed at the site.	
Lincoln Memorial, Vietnam Veterans Memorial, Korean War Veterans Memorial	6:56 pm – 8:35 pm (1 hour 38 min)	Group was engaged in general sightseeing. After dropping off the group, the driver went to park at a loading location. While the group was sightseeing, the driver watched videos.	Tour Guide/Education (8:30 pm). Tour guide talked about the history of the sites.
In Transit (Empty)	8:30 pm – 8:36 pm (6 min)	Traffic was not at all congested.	
Korean War Veterans Memorial / Loading (See Figure 3.2: Pickup 9)	8:36 pm – 8:40 min (4 min)	Loading was orderly. Trash containers, recycling bins, waysides and directional signage present at the loading site.	
In Transit	8:43 pm – 8:45 pm (2 min)	Bus was in transit to Martin Luther King, Jr. Memorial. Traffic was not at all congested.	
Martin Luther King, Jr. Memorial / Unloading (See Figure 3.2: Dropoff 10)	8:46 pm – 8:48 pm (2 min)	Unloading was orderly, but the bus had to park in a non-designated loading zone. Traffic was not at all congested. Trash containers were present near the memorial.	
Martin Luther King, Jr. Memorial	8:48 pm – 9:07 pm (15 min)	Group engaged in general sightseeing. Tour took group photos. Traffic was not at all congested. Interpretative signage and trash containers observed.	
Martin Luther King, Jr. Memorial / Cruising (Empty)	8:49 pm – 9:00 pm (11 min)	Bus was cruising. Traffic not at all congested. Driver had to park in a “no-parking” zone because there was no parking available in loading zone.	
Martin Luther King, Jr. Memorial / Loading (See Figure 3.2: Pickup 11)	9:01 pm – 9:10 pm (9 min)	Bus stopped in zone beyond time needed for loading/unloading and idled for more than three minutes. Bus also parked in a handicapped zone to load. No signs were present.	
In Transit	9:11 pm – 9:23 pm (12 min)	Group returned to Arlington Best Western Hotel. Unloading was orderly.	

FIGURE 3.2: TOUR ROUTE — SCHOOL GROUP 2, THURSDAY, JUNE 13, 2013



3.3 ADULT GROUP 1 — THURSDAY, APRIL 11, 2013

3.3.1 Overview

The origin of Adult Group 1 was a northwest city of Virginia. The researchers joined them on the second day of a multi-day tour. The weather on Thursday, April 11, 2013 was unseasonably warm with temperatures reaching into the mid 80's through the day. The adult group was friendly and talkative during the morning hours and showed visible signs of weariness as the day progressed. Of the 23 member tour group, one member required use of an assistive device (wheelchair). Interpretive signage, directional signage, trash and recycling containers, and restrooms were sufficient at most locations. Throughout the day the tour guide was extremely friendly and provided commentary and other relevant information keeping the tour group engaged both on and off the bus. The driver was well experienced in the laws and regulations of the District and discussed creative ways he and other drivers avoid parking fees and enforcement infractions. Traffic within the District was moderately congested throughout the tour, but volume was normal for District traffic and expected. Many of the activity locations on this day (Union Station, National Cathedral, Hillwood Estates) provided onsite parking. While at several onsite parking locations idling infractions were observed. Issues of excessive cruising and parking availability provided challenges during the long wait encountered as the tour group visited the U.S. Capitol and Library of Congress. While waiting for tour group to finish at the U.S. Capitol and Library of Congress and cruising (empty) the District streets the driver did encounter DC DOT traffic stop on Maryland Avenue and then proceeded to a free parking location near RFK stadium for duration of the wait. The subsequent loading of tour members at intersection of 3rd and East Capitol Street was outside a designated loading zone. The tour route was a total of 15 driving miles with participants walking 3.8 pedestrian miles (Figure 3.3).

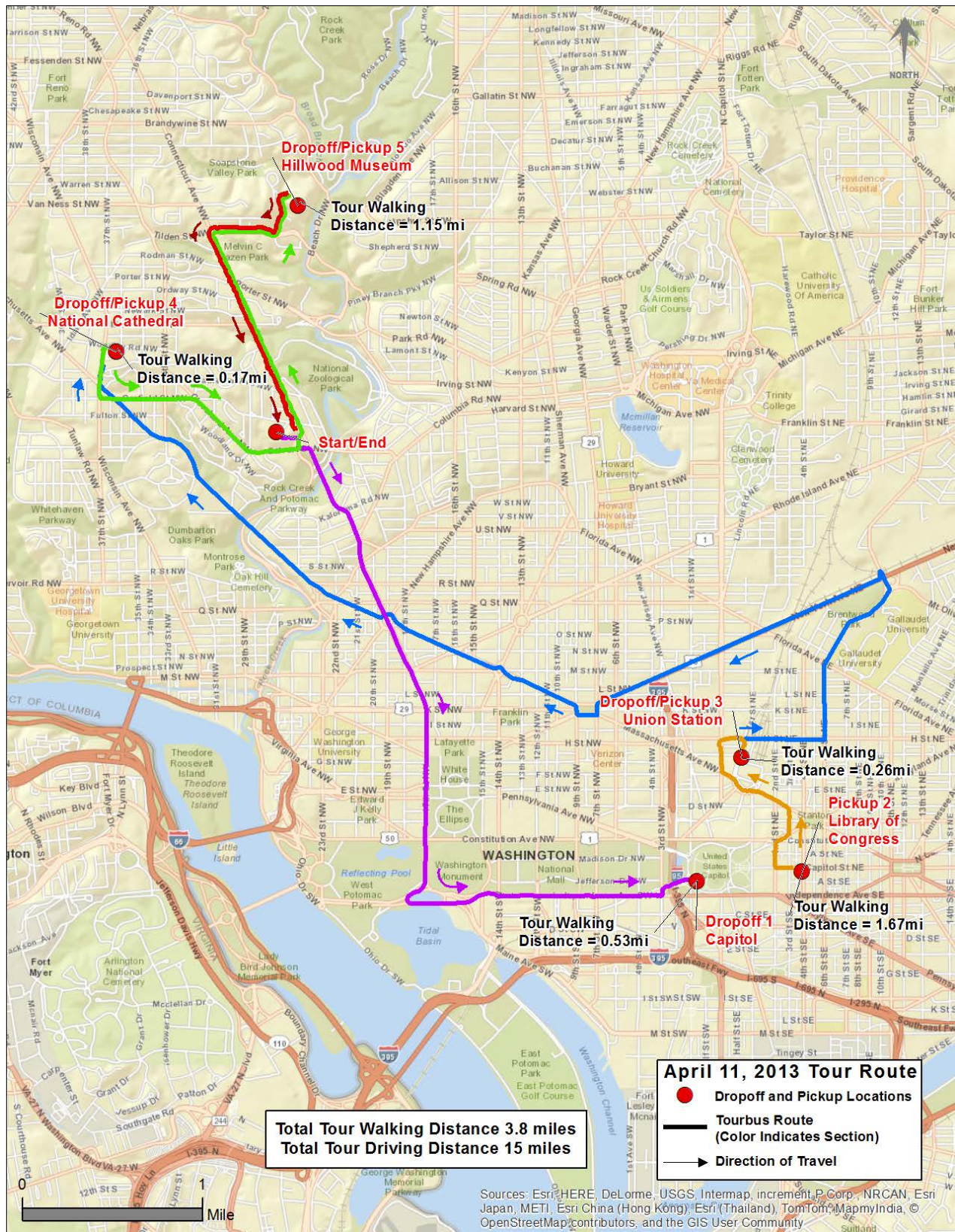
3.3.2 Documented Activities, Site Assessment, Researcher Observations, and Overheard Commentary

TABLE 3.3: ADULT GROUP 1 — DOCUMENTED ACTIVITIES, SITE ASSESSMENT / OBSERVATIONS, COMMENTS

Adult Group 1 — Thursday, April 11, 2013 (23 Participants from Virginia)			
Location / Activity	Start – End Time (Duration)	Site Assessment / Researcher Observations	Overheard Commentary: Speaker / Theme (Time) Comment Summary
Washington Marriott Wardman Park (Loading)	7:50 am – 8:06 am (16 min)	Trash containers available as loading. Orderly loading of passengers.	
Leave hotel / in transit to U.S. Capitol	8:06 am – 8:31 am (25 min)	Not at all congested. Free flowing traffic.	
U.S. Capitol Building and Library of Congress / Unloading, Sightseeing (See Figure 3.3: Dropoff 1)	8:31 am – 12:15 pm (3 hr 44 min)	Moderately congested. Several buses loading and unloading at the site. Bus cruising (empty) for part of the time. Passengers visited the U.S. Capitol and then walked to the Library of Congress through a tunnel.	Driver / Regulations and Enforcement (10:36 am) Local drivers have places to park "hide" where they won't really be bothered by parking enforcement and such. Driver / Bus Parking (10:30 am) Explained that you should not abuse a parking area. Stay there for a time but move on when it gets to full or is impending normal flow. Driver / Bus Parking (10:58 am) He said that he doesn't go looking for parking. He knows that after a certain time Maine Ave. is blocked so after the DOT stop that was finished at 9:30 am he wasn't going to even try. He is looking for access to things so he would go over the Crystal City or Pentagon City and pay to park in order to have access to food and bathrooms.

Adult Group 1 — Thursday, April 11, 2013 (23 Participants from Virginia)			
Location / Activity	Start – End Time (Duration)	Site Assessment / Researcher Observations	Overheard Commentary: Speaker / Theme (Time) Comment Summary
Loading at Library of Congress / In transit to Union Station (See Figure 3.3: Pickup 2)	12:15 pm – 12:35 pm (20 min)	Moderately congested (especially on 3 rd and East Capitol). High volume of vehicles trying to park.	
Union Station / Lunch (See Figure 3.3: Dropoff/Pickup 3)	12:35 pm – 1:32 pm (57 min)	Very congested in Union Station Parking Garage.	
In transit to Washington National Cathedral	1:32 pm – 2:20 pm (48 min)	Moderately congested traffic.	
Washington National Cathedral / Unloading, Sightseeing (See Figure 3.3: Dropoff/Pickup 4)	2:20 pm – 3:15 pm (55 min)	Moderately congested with numerous buses loading and unloading. High volume of tour buses at this site.	
In transit to Hillwood Estate, Museum and Gardens	3:15 pm – 3:55 pm (40 min)		
Hillwood Estate, Museum and Gardens / Unloading, Sightseeing (See Figure 3.3: Dropoff/Pickup 5)	3:55 pm – 4:58 pm (1 hr 3 min)	Moderately congested traffic.	
In transit	4:58 pm – 5:14 pm (16 min)		
Washington Marriott Wardman Park (Unloading)	5:14 pm – 5:20 pm (6 min)	Researchers departed and tour group went on to a presentation and dinner at the Royal Embassy of Saudi Arabia.	

FIGURE 3.3: TOUR ROUTE — ADULT GROUP 1, THURSDAY, APRIL 11, 2013



3.4 ADULT GROUP 2 — FRIDAY, MAY 2, 2014

3.4.1 Overview

Adult Group 2 originated from North Carolina. This adult tour was planned by a major motorcoach company, with all aspects of the itinerary predetermined by the company planners. Participants registered independently. Most had travel companions and did not know the other passengers prior to the tour. The driver was very experienced with navigating in and around DC. He was cognizant of every driving violation he made and seemed to know when he could ignore regulations and when he could not. A professional tour guide accompanied the group for the first half of the day, up until they unloaded at the U.S. Capitol for a tour managed onsite. After the U.S. Capitol tour, the group leader representing the motorcoach company acted as an ad hoc guide with input from the driver. The 14-hour tour was thorough, yet many of the passengers were clearly exhausted by the end of the day even though the weather remained mild. The dinner stop at Pentagon City Mall seemed particularly long, exceeding two hours. The tour company may benefit from a later start time on days when a night tour of the monuments is included in the itinerary. The group as a whole was very congenial, and there was much laughter and enjoyment throughout the day. The tour route was a total of 98.8 driving miles with participants walking 6.26 pedestrian miles (Figure 3.4).

3.4.2 Documented Activities, Site Assessment, Researcher Observations, and Overheard Commentary

TABLE 3.4: ADULT GROUP 2 — DOCUMENTED ACTIVITIES, SITE ASSESSMENT / OBSERVATIONS, COMMENTS

Adult Group 2 — Friday, May 2, 2014 (31 Participants from North Carolina)			
Location / Activity	Start – End Time (Duration)	Site Assessment / Researcher Observations	Overheard Commentary: Speaker / Theme (Time) Comment Summary
Hilton Garden Inn, Vienna, VA / Loading, In transit to DC	7:57 am – 9:01 am (1 hr 4 min)	Trash containers available while loading. Ran into commuter traffic that caused moderate congestion. Picked up a local tour guide at the Old Post Office.	
Lincoln Memorial / Korean War Veterans Memorial / Vietnam Memorial / Unloading and Sightseeing (See Figure 3.4: Dropoff/Pickup 1)	9:02 am – 10:33 am (1 hr 31 min)	Within walking distance there are trash and recycling containers, bathrooms, water fountains, site information, waysides, directional signage, refreshments, a bookstore and site programs.	
Cruising	9:05 am – 10:30 am (1 hr 25 min)	Driver not parking. Just circulating Ohio Drive to Hanes Point area.	
Loading / In transit	10:34 am – 10:53 am (19 min)		
World War II Memorial (See Figure 3.4: Dropoff/Pickup 2)	10:54 am – 11:30 am (36 min)	Within walking distance there are trash and recycling containers, bathrooms, water fountains, site information, waysides, directional signage and site programs.	
Loading / In transit	11:31 am – 11:53 am	No space available. Loaded in non-designated area.	
National Place (See Figure 3.4: Dropoff/Pickup 3)	11:54 am – 12:41 pm (47 min)	Trash containers at unloading site. The food court had trash and recycling containers, bathrooms, water fountains and site	

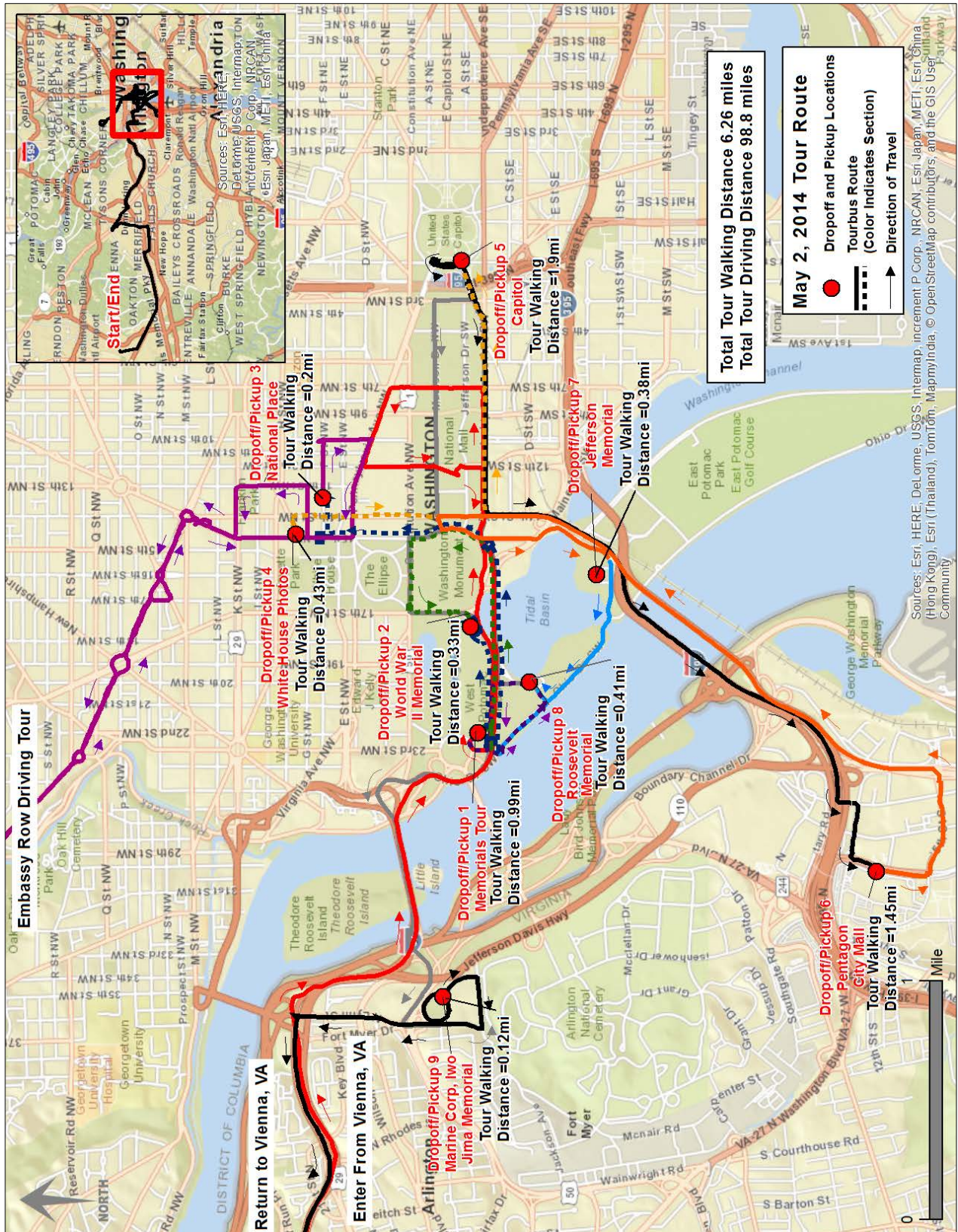
Adult Group 2 — Friday, May 2, 2014 (31 Participants from North Carolina)			
Location / Activity	Start – End Time (Duration)	Site Assessment / Researcher Observations	Overheard Commentary: Speaker / Theme (Time) Comment Summary
		information. Very congested area during the lunch hour. Driver double parked and unloaded roadside. Many other buses were double parked for drop off and pick up, even though there is a sign stating double parking prohibited at all times. Lunch at food court.	
Loading / In transit / Driving tour of Embassy Row	12:42 pm – 1:55 pm (1 hr 13 min)	Driver double parked and then moved and loaded in a non-designated area.	Tour Guide / Educational (12:47 pm). Talking about the scheme to assassinate Lincoln. Tour Guide / Educational (12:50 pm). Discussed more of the history and uses of Ford's Theatre then pointing out various buildings and fixtures along Pennsylvania Avenue. Passenger / Educational (12:51 pm). Pointed out Reagan building to seat mate Tour Guide / Educational (12:57 pm). Talking about nine different cities that served as the nation's capital throughout history. Also noted that Washington was first president under the constitution but prior to that were 1 year terms prior to revolutionary war. Tour Guide / Educational (1:55 pm) Discussing the history of embassy row. Then explaining how DC is set up as a quadrant. Discussed aspects of the Washington National Cathedral. Then discussed embassies and the upcoming Around the World Embassy Tour.
The White House / Brief stop for photos (See Figure 3.4: Dropoff/Pickup 4)	1:56 pm – 2:11 pm (15 min)	Trash containers were available while walking to location to take photos. Afternoon traffic congestion. Driver double parked on New York and 15 th and unloaded roadside. Stayed there during quick stop for photographs of The White House. Everyone who got off was excited to see a line of Secret Service vehicles. Many passengers stayed on the bus.	
Loading / In transit	2:12 pm – 2:28 pm (16 min)	Driver was able to move into a parking spot on New York and 15 th for loading.	
U.S. Capitol / Unloading, Tour, Sightseeing (See Figure 3.4: Dropoff/Pickup 5)	2:29 pm – 4:48 pm (2 hr 19 min)	Trash and recycling containers near unloading site. Inside U.S. Capitol there are trash and recycling containers, bathrooms, water fountains, directional signage, site information, a restaurant, gift shop and site programs. Guide mentioned long walk from west-side drop-off area close to U.S. Botanic Garden to U.S.	Passenger / Mobility (2:38 pm). Several passengers pointed out the Segway tour and made comments about wishing they had one to use. Passenger / Natural Resources (2:40 pm). "I love that tree!" Passenger / Mobility (2:42 pm). "I need the golf cart" (for transport to the U.S. Capitol). Security Officer / Enforcement (2:44 pm). No food, liquid or spray allowed in U.S. Capitol.

Adult Group 2 — Friday, May 2, 2014 (31 Participants from North Carolina)			
Location / Activity	Start – End Time (Duration)	Site Assessment / Researcher Observations	Overheard Commentary: Speaker / Theme (Time) Comment Summary
		Capitol entrance several times to prepare passengers. U.S. Capitol tour. Timed tickets for tour at 3:20 pm. Tour started about 10 min late.	<p>Passenger / Facilities (2:50 pm). Joking about line at restrooms and trying to get to front of line.</p> <p>Passenger / Mobility (3:31 pm). Commentary regarding why fellow passenger did not walk to the top rows of the introduction theater, as suggested.</p> <p>U.S. Capitol Employee / Safety and Enforcement (3:49 pm). Prior to film, used humor to discuss safety and rules while on the tour. "If something happens, run! Stay with group and touch nothing or you will have quick tour with U.S. Capitol police."</p>
Parking	2:42 pm – 4:38 pm (1 hr 56 min)	Driver parked on Maine Avenue for close to two hours. Was able to find spot right away.	Driver / Traffic Conditions and Parking (2:46 pm). Stated that he would like to have Ohio Drive or Hains Point dedicated to buses. Stated that there should be more parking garages available for cars and let the buses have the on street parking dedicated to buses. The removal of parking along Ohio drive SW has really affected overall parking situation for buses. Stated: "The parking situation was good today but a lot of times it isn't this way and I have to drive around and can't park anywhere close."
Loading / In transit	4:49 pm – 5:08 pm (19 min)		
Pentagon City Shopping Mall / Dinner and Shopping (See Figure 3.4: Dropoff/Pickup 6)	5:09 pm – 7:23 pm (2 hr 14 min)	<p>Buses were lined up. Very crowded. Trash containers at unloading site. Inside mall there are trash and recycling containers, bathrooms, water fountains, directional signage, site information, a food court and retail shops.</p> <p>Stopped for dinner and shopping opportunities. Seemed like a very long stop but allowed for night tour of memorials.</p>	
Loading / In transit	7:24 pm – 7:47 pm (23 min)		
Thomas Jefferson Memorial / Unloading and Sightseeing (See Figure 3.4: Dropoff/Pickup 7)	7:48 pm – 8:15 pm (19 min)	<p>Within walking distance there are trash and recycling containers, bathrooms, water fountains, site information, directional signage, a bookstore (closed) and site programs.</p> <p>Approximately one-third of the passengers stayed on bus. There was a spontaneous round of applause when the driver successfully parallel parked in a very tight area.</p>	

Adult Group 2 — Friday, May 2, 2014 (31 Participants from North Carolina)			
Location / Activity	Start – End Time (Duration)	Site Assessment / Researcher Observations	Overheard Commentary: Speaker / Theme (Time) Comment Summary
Cruising	7:53 pm – 8:15 pm (22 min)	Driver cruised entire time. Did not search for parking. Quite congested with many groups out viewing the monuments at night.	<p>Passenger and Driver / Parking and Enforcement (7:54 pm). As driver was pulling out after drop off at Thomas Jefferson, a passenger who elected to stay on the bus said, "Are we going to ride?" The driver responded, "We've got to ride, Clyde" as a joking acknowledgement of being in drop off only area.</p> <p>Passenger / Physical (7:57 pm). A passenger who elected to stay on the bus was talking about being very tired.</p> <p>Passenger and Driver / Orientation (8:12 pm). An on-bus passenger asked, "Where are we?" Driver chatted to the group, explaining locations as he drove.</p>
Loading / In transit (See Figure 3.4: Dropoff/Pickup 7)	8:15 pm – 8:20 pm (5 min)		<p>Passenger / Recreational Aspects (8:16 pm). One passenger who had gone to Thomas Jefferson asked an on-bus passenger, "Did we miss anything?" The on-bus passenger said he saw the most beautiful yacht as we drove along the water while cruising</p> <p>Passenger / Mobility (8:17 pm). Passenger talking about regretting wearing two inch heels. Several people laughed in agreement.</p>
Franklin Delano Roosevelt Memorial / Unloading and Sightseeing (See Figure 3.4: Dropoff/Pickup 8)	8:21 pm – 9:01 pm (40 min)	Within walking distance there are trash and recycling containers, bathrooms, water fountains, site information, directional signage, a bookstore (closed) and site programs. Approximately one-half of the passengers stayed on the bus.	Group Leader / Enforcement (8:21 pm). Explained that the bus has to move because driver cannot stay. Said that the driver would be back in 30 minutes or so. A passenger jokingly said, "He might not come back this time!"
Parking	8:27 pm – 8:56 pm (29 min)	Driver found parking on Ohio Drive.	<p>Driver and Passengers / Safety (8:30 pm). Passengers and driver talking about the safety of Segways at night, then talking about skateboarders they saw out at night. Then driver mentioned how cyclists often behave dangerously and why he never turns right on red in DC.</p> <p>Then started talking about other safety issues. Had conversations about gun violence in the area as well as homelessness. Changed the tone in the bus. Seeing a plane moved the conversation into air space, terrorism and then motorcades and helicopters to safely transport president and other political figures. When several jets left within a few minutes, a passenger said, "There is another jet leaving. You think they know something that we don't?"</p> <p>Passengers and Driver / Navigation (8:52 pm). Passengers were complimenting driver on his parallel parking and asking about his background and the furthest he has driven and difficult areas to navigate. The joking atmosphere returned. Could tell by the responses that the driver is proud to be part</p>

Adult Group 2 — Friday, May 2, 2014 (31 Participants from North Carolina)			
Location / Activity	Start – End Time (Duration)	Site Assessment / Researcher Observations	Overheard Commentary: Speaker / Theme (Time) Comment Summary
			of the company. Passengers / Traffic Conditions (8:56 pm). As driver was pulling out and heading back to pick up group, several passengers commented with surprise regarding how congested it was with buses at night. Passengers / Physical (8:59 pm). Talking about how well they are going to sleep tonight.
Loading / In transit	9:02 pm – 9:19 pm (17 min)		Passengers / Recreational Aspects (9:04 pm). Passengers talking about how awesome Franklin Delano Roosevelt Memorial was at night and pointing out other areas that look beautiful at night as we drove. Group Leader / Educational Aspects (9:05 pm). Mentioned that she picked up brochures for passengers who did not get off at the Franklin Delano Roosevelt Memorial. Went on to talk about all the student groups who were there.
Marine Corps War Memorial (i.e., Iwo Jima Memorial) (See Figure 3.4: Dropoff/Pickup 9)	9:20 pm – 9:35 pm (15 min)	Within walking distance there are portable bathrooms, waysides and directional signage. Approximately one-half of the passengers stayed on the bus.	Group Leader and Passengers / Physical (9:21 pm). Group leader asked if people wanted to get off or stay on bus. Many people said loudly, "Bus!" When some passengers wanted to get off, one noted, "I was hoping no one would get off." Passengers / Physical (9:25 pm). Passenger said sitting on bus does not do Iwo Jima justice. Tried to convince partner to get off. He said, "I can see it on the Internet."
Loading / In transit / Return to Hilton Garden Inn	9:36 pm – 10:04 pm (28 min)	End of day	Group Leader / Physical (9:50 pm). Talked about how worn out everyone is and they have to get up at 6:00 am. Noted self-deprecatingly that if she would just stop talking they would probably sleep on the way back. Several laughed. It has been a very congenial group.

FIGURE 3.4: TOUR ROUTE — ADULT GROUP 2, FRIDAY, MAY 2, 2014



3.4.3 Photographic Documentation

PHOTO 3.2: PROFESSIONAL TOUR GUIDE



PHOTO 3.3: SEGWAY TOURS



Several tour participants mentioned that they wish they had a Segway for getting around instead of all the walking.

PHOTO 3.4: MEDICAL PERSONNEL RESPONSE AT U.S. CAPITOL.



PHOTO 3.5: TIMED ENTRY TICKET FOR U.S. CAPITOL TOUR



PHOTO 3.6: MULTI-GENERATIONAL REPRESENTATION ON TOUR



PHOTO 3.7: RESTORATION PROJECT AT U.S. CAPITOL



PHOTO 3.8: OVER 1,300 BREAKS BEING REPAIRED IN U.S. CAPITOL DOME

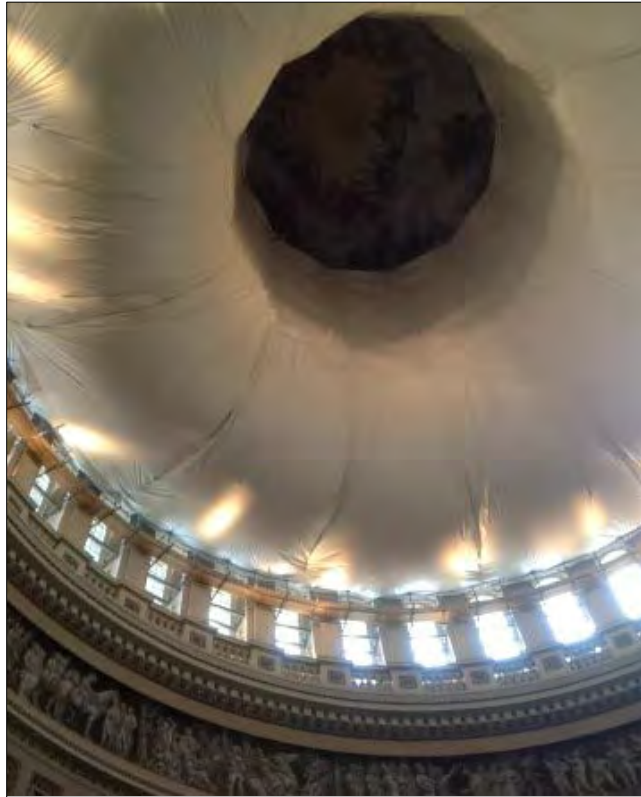


PHOTO 3.9: U.S. CAPITOL GUIDE



PHOTO 3.10: SPRING LANDSCAPING AND VIEWS



Many visitors commented on the trees in bloom and the beautiful weather, as well as landscaping and views.



PHOTO 3.11: RECYCLING CONTAINERS AND TRASH CONTAINERS



Containers were readily accessible and frequently side by side, making them convenient to use.

PHOTO 3.12: NIGHT TOUR



Passengers were tired but still enjoyed the night tour.

3.5 CULTURAL GROUP 1 — MONDAY, JANUARY 13, 2014

3.5.1 Overview

Cultural Group 1 consisted of 19 visitors from South Korea. The tourists just arrived at the Dulles International Airport at 11:50 am that morning and the tour guide picked them up at the airport and guided them to a Korean restaurant in Annandale before the DC motor coach tour took place. Although the tour took place on a winter day, the weather was relatively warm and mild. The full tour itinerary for this group includes 8 nights and 9 days and their primary destination was built around Niagara Falls and Montreal in Canada. The tour guide continuously talked about American history, culture, people, and living conditions or the sites where the group visited in DC. However, most people seemed to be tired from the 14 hour flight and were not engaged in the tour.

The original motor coach broke down just as the group arrived inside DC. The driver attempted to fix the bus as the group sat on the bus for about 20-30 minutes. The driver tried to fix the problem but there was no sign of improvement. The tour guide decided to change the itinerary and flexibly responded to the emergency. The tour guide requested help to the other tour company in the region (Annandale) that owned a medium sized bus. The guide directed the passengers to walk to the first site, which was the National Museum of Natural History. When the tour group finished their tour at the National Museum of Natural History, the new bus was waiting for the passengers in front of the museum. The tour group then rode this medium sized bus for the remainder of their time in DC. When the group was leaving for Niagara Falls, the bus company sent a new large bus to the group. As most people in the tour group were not engaged in the tour, the tour guide seemed to modify the tour schedule and wrapped up the DC tour little early around 4:40 pm and left for the next destination.

The driver of the medium sized bus seemed to know DC tour quite well and the traffic was not congested. It was easy to find loading/unloading spaces at each stop. When parking was not available, the driver cruised areas near the site and parked at available parking areas. The tour guide and the driver were on a constant communication each other and the driver came to the loading/unloading zone to pick up the passengers when the tour finished. At each destination, the tour guide provided the interpretative talks including history, background, meanings and values of the visited monuments and sites. The tour route was a total of 45.4 driving miles with participants walking 2.0 pedestrian miles (Figure 3.5).

3.5.2 Documented Activities, Site Assessment, Researcher Observations and Overheard Commentary

TABLE 3.5: CULTURAL GROUP 1 — DOCUMENTED ACTIVITIES, SITE ASSESSMENT / OBSERVATIONS, COMMENTS

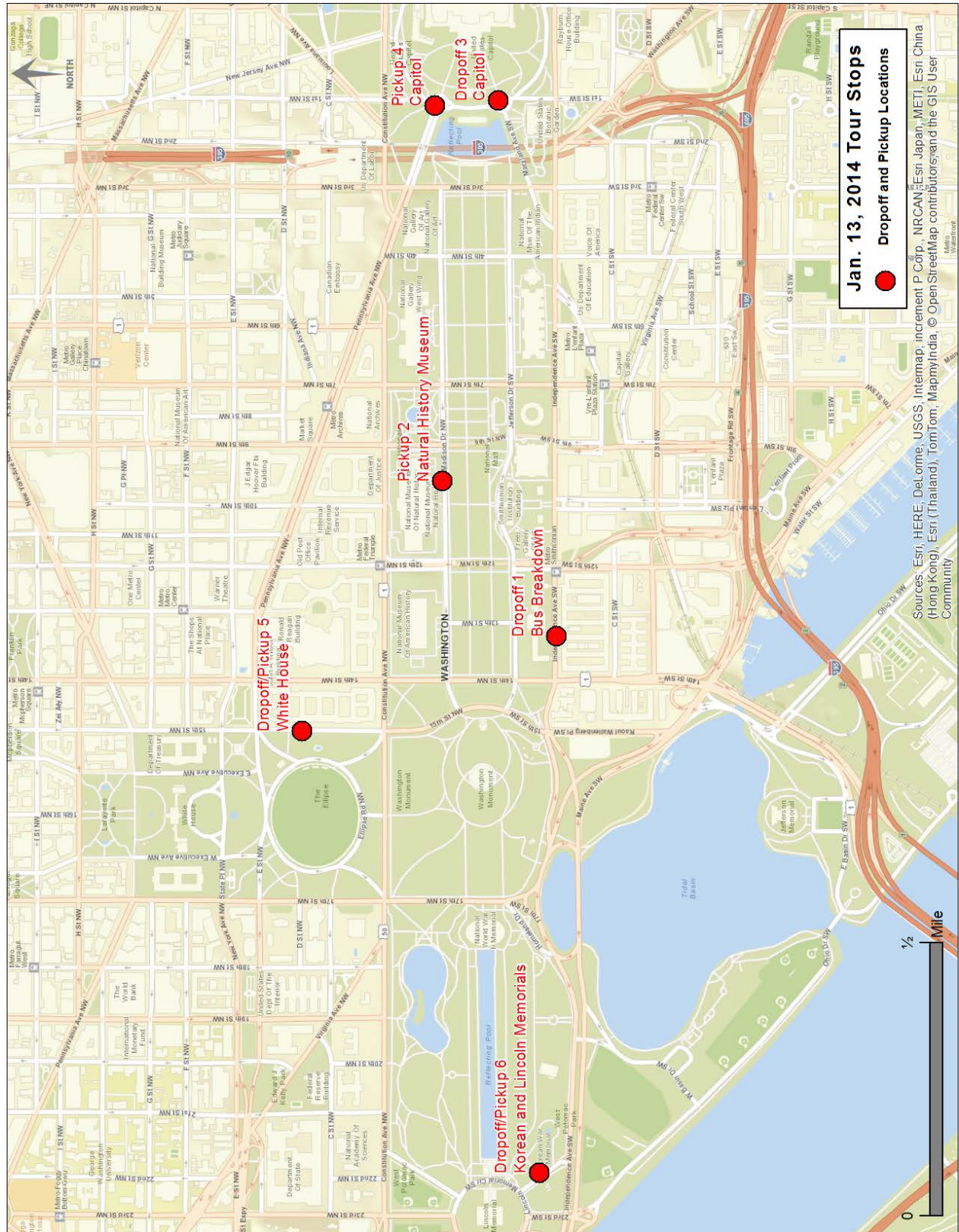
Cultural Group 1 — Monday, January 13, 2014 (19 Participants from South Korea)			
Location / Activity	Start – End Time (Duration)	Site Assessment / Researcher Observations	Overheard Commentary: Speaker / Theme (Time) Comment Summary
Korean Restaurant at Annandale / Loading	12:55 pm – 12:59 pm (4 min)	Idling more than 3 minutes. Orderly loading and heading to DC There are 19 tourists who just arrived from Korea at 11:50am The guide picked them up at the Dulles airport and the group had a lunch at Annandale before heading to DC. They will take a half day DC tour today and will go to Niagara Fall tomorrow. It is 8 nights and 9 days trip.	Tour Guide/ Orientation (1:00pm). The guide welcomed the passengers who just arrived to the U.S. from Korea. Oriented the tour group about safety tips, directions, and tour schedules. Talked about American history, culture, and life relevant to DC region.
In transit to DC	12:59 pm – 1:09 pm (10 min)	It was very congested due to an accident. Motor coach is broken down and	Tour Guide/ Educational aspect of visit (1:00pm). The guide continued to talk to the group

Cultural Group 1 — Monday, January 13, 2014 (19 Participants from South Korea)			
Location / Activity	Start – End Time (Duration)	Site Assessment / Researcher Observations	Overheard Commentary: Speaker / Theme (Time) Comment Summary
		parked on the street at the corner of 14 th and Independence Ave.	regarding American history, culture, and life relevant to DC region throughout the entire transit period.
On bus waiting (at the corner of 14 th and Independence Ave) (See Figure 3.5: Dropoff 1)	1:10 pm – 1:30 pm (20 min)	Bus was pulled to roadside due to the engine problem. A driver got off to check up. He could not fix the problem at the site and asked a help to the company. Unloaded at the unexpected site due to a problem with a bus.	Tour Guide/ Mobility (1:24 pm). Tour guide changed the tour schedule to first visit National Museum of Natural History which was in walking distance. Driver/ Regulations & Enforcement (1:28 pm). Motor coach drivers have to fill out daily driving log and it is mandatory to keep the record to maintain their driving under 12 hours per day. Drivers also keep their medical record and police check this out from time to time.
Walk to National Museum of Natural History / Tour museum	1:31 pm – 2:53 pm (1 hr 22 min)	Changed the tour schedule. Walked to National Museum of Natural History from the corner of 14 th and Independence Ave.	Tour Guide/ Other (motor coach breaking down) (2:35pm). The guide mentioned about the bus problem and potential complaints from the passengers. The guide mentioned that it was lucky for the bus was broken in the city as it is relatively easy to solve the problem. Most passengers understand the situation but 10% of passengers always complain about this kind of incident.
Loading / In transit (See Figure 3.5: Pickup 2)	2:53 pm – 2:55 pm (3 min)	Heading to U.S. Capitol. Riding on a different bus due to the problem with the original bus.	Tour guide/ Other (new bus) (2:55 pm). The guide introduced a new driver and a new bus to the tour group.
U.S. Capitol/ Unloading (See Figure 3.5: Dropoff 3)	3:00 pm – 3:12 pm (12 min)	The bus unloaded the passengers at a non-designated loading/unloading zone.	Tour guide/ Direction (3:00 pm). The tour guide directed people to the Capitol. Provided a brief, interpretive talk about the history, function, and architectural design and significance of the Capitol.
Parking	3:03 pm – 3:12 pm (9 min)	The bus was parked at the 2 hr street parking near Capitol.	
Loading/ In transit (See Figure 3.5: Pickup 4)	3:13 pm – 3:21 pm (8min)	The bus loaded the passengers at a non-designated loading/unloading zone by the back yard of the Capitol.	
The White House / Unloading, brief stop for photos (See Figure 3.5: Dropoff/Pickup 5)	3:22 pm – 3:37 pm (15 min)		Tour Guide/ Traffic Conditions (3:22pm). "This group is lucky. There is a space for loading/unloading. Normally there is no space to stop due to many tour buses."
Loading / In transit	3:38 pm – 3:40 pm (2 min)	The guide provided interpretation entire time.	
Korean War Veterans Memorial/ Lincoln Memorial / Unloading (See Figure 3.5: Dropoff/Pickup 6)	3:40 pm – 4:16 pm (36 min)	Within walking distance there are trash and recycling containers, bathrooms, water fountains, site information, waysides, directional signage, refreshments, a bookstore and site programs.	Tour Guide/ Regulations & Enforcement (3:45pm). DC parking ticket is so expensive. One time, he got a ticket with \$500 fine while New York City ticket was only \$130. Tour Guide/ Other (parking problem in DC) (3:50 pm). Korean group tour goes really fast. They do not take more than 30 minutes in one place and the bus can't be parked at RFK stadium. It takes too long to come and go. Tour Guide/ Regulations & Enforcement (4:05 pm). DC police enforces parking violations in peak season.

Cultural Group 1 — Monday, January 13, 2014 (19 Participants from South Korea)			
Location / Activity	Start – End Time (Duration)	Site Assessment / Researcher Observations	Overheard Commentary: Speaker / Theme (Time) Comment Summary
Cruising / parking	3:59 pm – 4:19 pm (20 min)	Passengers unloaded and the bus driver stayed parking at the Lincoln Memorial site for 19 minutes. Then, the bus began cruising to find a parking place close to the FDR memorial site. The bus parked at the FDR memorial site for 5 minutes. The guide called to the bus driver and the bus moved to pick up the passengers.	
Loading/ In transit (See Figure 3.5: Dropoff/Pickup 6)	4:19 pm – 4:21 pm (2 min)	The Passengers were loaded and the bus left for the next destination, which is Niagara Fall in Canada.	

FIGURE 3.5: TOUR STOPS — CULTURAL GROUP 1, MONDAY, JANUARY 13, 2014

NOTE: Due to missing mapping data, tour stops are indicated rather than the full tour route.



3.6 CULTURAL GROUP 2 — SUNDAY, APRIL 27, 2014

3.6.1 Overview

It was beautiful day to tour and the Korean cultural tourists who had just arrived to the U.S. via New York City the previous evening were excited with their first day of the tour itinerary. The morning of the tour they traveled for 5 hours from New York City to DC. Their entire tour itinerary includes 10 nights and 11 days and their primary destinations are Niagara Falls and other attractions in Canada. The tour guide engaged the tour group throughout the day by telling them stories about regional history, historical events and figures, and American culture and life. It was relatively small group with 12 passengers and the tour moved very smoothly and orderly. The tour guide provided the interpretation at every each site, and then gave the group a free time to take pictures, take their own tour of the site and use restroom facilities. The driver knew the area well. When parking was not available, the driver cruised the area. The tour route was a total of 17.6 driving miles with participants walking 2.1 pedestrian miles (Figure 3.6).

3.6.2 Documented Activities, Site Assessment, Researcher Observations and Overheard Commentary

TABLE 3.6: SCHOOL GROUP 2 — DOCUMENTED ACTIVITIES, SITE ASSESSMENT / OBSERVATIONS, COMMENTS

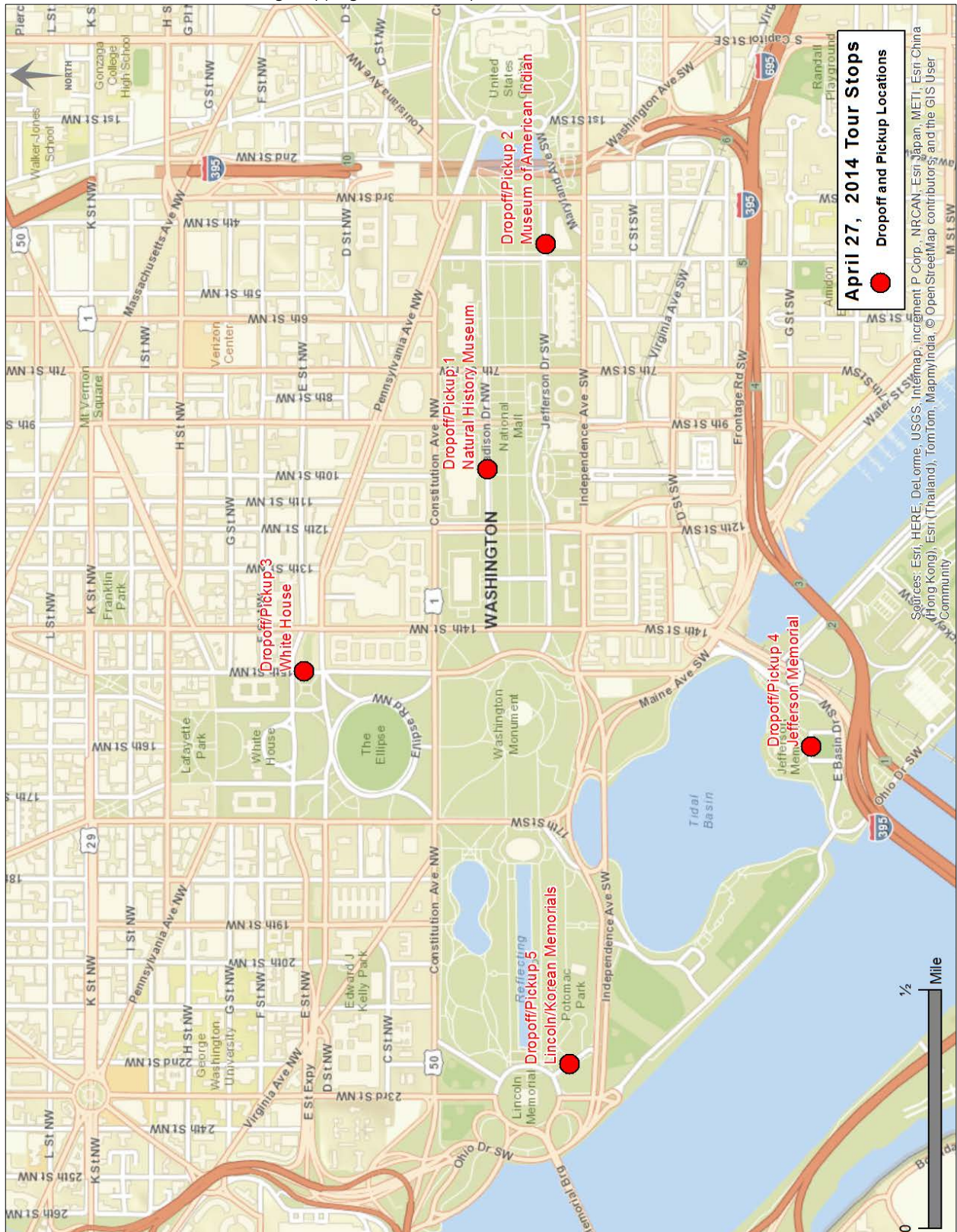
Cultural Group 2 — Sunday, April 27, 2014 (12 Participants from South Korea)			
Location / Activity	Start – End Time (Duration)	Site Assessment / Researcher Observations	Overheard Commentary: Speaker / Theme (Time) Comment Summary
Gungjeon Restaurant, Glen Burnie MD / Loading	11:55 am – 12:00 pm (5 min)	The tour group arrived from Korea the night before and stayed in New York City. They drove to DC this morning from New York City and at this Korean restaurant for lunch before going in to DC. After lunch the loading was orderly loading, but the driver idled more than 3 minutes.	Tour guide/ Orientation (11:58am). The guide oriented the day's tour schedule and safety tips. Introduced researchers to the tour group. Talked about American history relevant to Maryland and DC area and American culture and life.
Leave restaurant/ in transit to DC	12:00 pm – 12:40 pm (40 min)	No traffic congestion at all. The tour guide spoke the entire time while in transit and was standing almost entire time while in transit.	Tour guide/ Educational aspects of visit (12:05pm). The guide continued to talk about American culture, history and life. Tour Guide/ Other (Korean tour style) (12:30pm). The guide mentioned Korean group tour style. Koreans who were on the group tour liked the busy schedule and preferred short stay at one site and dropped by as many sites as possible, compared to long stay at one site with fewer attractions/stops.
National Museum of Natural History / Unloading and Sightseeing (See Figure 3.6: Dropoff/Pickup 1)	12:47 pm – 12:49 pm (2 min)	Within walking distance there are trash and recycling containers. Unloading went smoothly.	Tour guide/ Direction/Orientation (12:47pm). The guide oriented the passengers where to go and what to see in a given time.
National Museum of Natural History / Parking	12:47 pm – 2:25 pm (1 hr 38 min)	Driver parked at loading/unloading zone in front of the National Museum of Natural History for about 1.5 hr and the engine was on until 12:53 pm Tourists were initially asked to come back at 2:00 pm but the meeting time was postponed until 2:20 pm.	
Loading at National Museum	2:06 pm – 2:25 pm (19 min)	Moderately congested. Idling more than 3 minutes.	

Cultural Group 2 — Sunday, April 27, 2014 (12 Participants from South Korea)			
Location / Activity	Start – End Time (Duration)	Site Assessment / Researcher Observations	Overheard Commentary: Speaker / Theme (Time) Comment Summary
of Natural History / In transit		The engine was back on at 1:51 pm and remained on until loading was completed at 2:25 pm because the passengers arrived individually for over 20 minutes.	
U.S. Capitol/Unloading (See Figure 3.6: Dropoff/Pickup 2)	2:25 pm – 2:46 pm (21 min)	The tour bus stopped and passengers unloaded at the National Museum of the American Indian in order to see the U.S. Capitol. Passengers were directed to the U.S. Capitol. Within walking distance there are trash and recycling containers.	Passenger / Other – Bus conditions (2:29 pm). Tourists complained about hot temperature inside of the bus and uncleanliness and poor quality of the bathroom on the bus. Tour guide/ Educational aspect of visit (2:30 pm). The guide provided interpretive talk to passengers regarding the U.S. Capitol building design, historic significance of the building, and U.S. Congress.
National Museum of American Indian / Parking (Jefferson Drive)	2:29 pm – 2:45 pm (16 min)	The bus remained parked at loading/unloading zone for about 20 minutes until the passengers came back from Capitol tour. The engine was off at 2:35 pm and was back on at 2:45 pm	
Loading at National Museum of American Indian/ In transit	2:46 pm – 3:02 pm (16 min)	It was moving little slowly not due to the heavy traffic but due to a marathon event <i>en route</i> to next stop.	Tour guide/ Direction (2:50pm). The guide explained the bus was detouring and taking little longer because of road blockings due to the marathon event.
The White House (15 th Street) / Unloading (See Figure 3.6: Dropoff/Pickup 3)	3:02 pm – 3:18 (16 min)	Within walking distance there are trash and recycling containers, bathrooms, water fountains. Orderly unloading and a very brief stop.	Tour guide/ Safety (3:05 pm). The tour guide mentioned how safety and security issues changed the tour routes in DC. For example, the tourists were able to approach the White House from the Pennsylvania Ave. and could view the White House from a closer location. Now there are a lot of blockings and heavy barricade in almost all government buildings in DC. Tour Guide / Other - Koreans tour style and preference (3:15 pm). Washington, DC is not an attractive destination to most Korean tour groups, who often find it boring. Most Korean group tourists are more fascinated by natural places like Niagara Falls or the Grand Canyons. That is why they spend only a half-day in DC.
Parking (White House/15 th street)	3:03 pm – 3:20 pm (17 min)	The bus remained parked on 15 th street for the entire time until the passengers came back.	
Loading / In transit	3:18 pm – 3:27 pm (9 min)	Moderately congested. The bus idled more than 3 minutes.	
Thomas Jefferson Memorial (E. Basin drive)/ Unloading (See Figure 3.6: Dropoff/Pickup 4)	3:28 pm – 4:05 pm (37 min)	The site has trash and recycling containers, bathrooms, water fountains, site information, waysides, and directional signage. Driver infractions included double parking, unloading on the roadside and idling more than 3 minutes.	Passenger / Other – entrance process at the airport (3:24pm). It took too long to go through the US customs. Took 2 hours to go through customs. Tour guide/ Educational aspect of visit (3:35pm). The guide provided the interpretive talk about Thomas Jefferson's philosophy and the architectural significance of the Thomas Jefferson Memorial.
Cruising / Parking	3:28 pm – 4:06 pm (39 min)	After unloading the passengers, the tour bus cruised around the	

Cultural Group 2 — Sunday, April 27, 2014 (12 Participants from South Korea)			
Location / Activity	Start – End Time (Duration)	Site Assessment / Researcher Observations	Overheard Commentary: Speaker / Theme (Time) Comment Summary
		Ohio Drive/ Tidal Basin area. Then the bus parked at “No Parking” zone at 3:40 pm and the engine was on until 3:43 pm. An officer stopped and informed the driver and that he is parked in a “No Parking” zone but the driver remained with no action.	
Loading at E. Tidal Basin (Thomas Jefferson Memorial) / In transit	4:07 pm – 4:11pm (4 min)	Idling more than 3 minutes. Transition was smooth, not congested at all.	
Lincoln Memorial and Korean War Veterans Memorial / Unloading (See Figure 3.6: Dropoff/Pickup 5)	4:13 pm – 5:03 pm (50 min)	Within walking distance there are trash and recycling containers, bathrooms, water fountains, site information, waysides, directional signage and a bookstore. Infractions included double parking, unloading on roadside, unsafe exiting of bus and passenger jaywalking. A guide suggested the rushed unloading of passengers in the middle of the road because the loading/unloading zone was blocked by many buses.	Tour guide/ Educational aspect of visit (4:18 pm). The guide provided the interpretive talk about Lincoln Memorial and Korean War Veterans Memorial.
Cruising / Parking	4:15 pm – 4:57 pm (42 min)	The bus cruised after unloading the passengers and parked at 3 hr parking zone. The engine was turned off at 4:22 pm and was turned back on at 4:57 pm.	
Lincoln Memorial & Korean War Veterans Memorial / Loading, in transit	5:03 pm -	The bus was departed for the next destination, which is Niagara Falls in Canada.	

FIGURE 3.6: TOUR STOPS — CULTURAL GROUP 2, SUNDAY, APRIL 27, 2014

NOTE: Due to missing mapping data, tour stops are indicated rather than the full tour route.



3.6.3 Photographic Documentation

PHOTO 3.13: DOUBLE PARKED BUSES FOR LOADING AND UNLOADING



PHOTO 3.14: ROADSIDE UNLOADING



3.7 HONOR FLIGHT GROUP 1 — SATURDAY, JUNE 1, 2013

3.7.1 Overview

While the weather on June 1, 2013 was exceptionally warm, the veterans and their assistants remained engaged throughout the 12-hour tour. Of the 52 participants, approximately 20 were veterans while the remaining members were comprised of the veterans' assistants, tour leaders and the research team. The group leader took many opportunities throughout the day to reinforce the importance of the veterans' contributions and volunteers at the World War II Memorial were on hand to warmly welcome the group. The combination of the many assistive devices in use (i.e., 11 wheelchairs as well as walkers and canes) and the unseasonably hot temperatures contributed to the fact that the driver surpassed the Washington, DC idling law of three minutes throughout the day. Unloading or loading generally took a minimum of 10 minutes. The driver was very experienced and aware of the parking regulations and selectively chose to break them when he felt that it would not result in ticketing. In cases where parking was not available or inconvenient, the driver cruised areas that were familiar to him. Safety issues were specific to staying hydrated and avoiding injuries, with concerns regarding falling noted in particular. Site assessment indicated that trash receptacles and restrooms were readily available at the chosen sites. The educational nature of the tour was emphasized with ongoing commentary from the group leader and occasional input from the driver. Great effort was also taken to orient the passengers at each location so that they knew what to expect. The overall meaning of the experience was emphasized by the group leader, driver and passengers. The tour route was a total of 91.5 driving miles with participants walking 2.8 pedestrian miles (Figure 3.7).

3.7.2 Documented Activities, Site Assessment, Researcher Observations and Overheard Commentary

TABLE 3.7: HONOR FLIGHT GROUP 1 — DOCUMENTED ACTIVITIES, SITE ASSESSMENT / OBSERVATIONS, COMMENTS

Honor Flight Group 1 — Saturday, June 1, 2013 (52 Participants from Various Places of Origin)			
Location / Activity	Start – End Time (Duration)	Site Assessment / Researcher Observations	Overheard Commentary: Speaker / Theme (Time) Comment Summary
Hilton Baltimore BWI Hotel / Loading	7:30 am – 7:57 am (27 min)	Trash containers available as loading. Orderly loading of Honor Flight veterans and assistants.	Group Leader / Orientation (8:00 am). Prayer to start day and comments acknowledging veterans. Used humor regarding driver closing eyes during prayer. Introduced a video that they will be watching regarding World War II. Also introduced researchers regarding the study as well as the driver, Mike.
Leave hotel / in transit to DC	8:01 am – 8:46 am (45 min)	Three volunteer veterans on Harley Davidson motorcycles acted as escorts, leading bus from hotel to DC.	Group leader / Orientation (8:37 am). Indicating what to expect when arriving at memorial. Mentioned that Senator Bob and Elizabeth Dole might be there and mentioned Bob's health issues and that Elizabeth is a hugger. Logistics of time when off bus. Guardians off first. If veteran goes down first, better to land on a guardian. Line at men's room will be longer always makes ladies laugh. Drink plenty of water. Also pointing out various views along the way. Reminder that they would take pictures of the veterans at the memorial.
World War II Memorial / Unloading and Sightseeing	8:46 am – 10:35 am (1 hr 45 min)	Within walking distance there are trash and recycling containers, bathrooms, water fountains, site information, waysides, directional	Group Leader / Orientation (8:44 am). "This is your memorial, ladies and gentleman." Greeter / Orientation (8:57 am). Discussed roles in war with various veterans, including

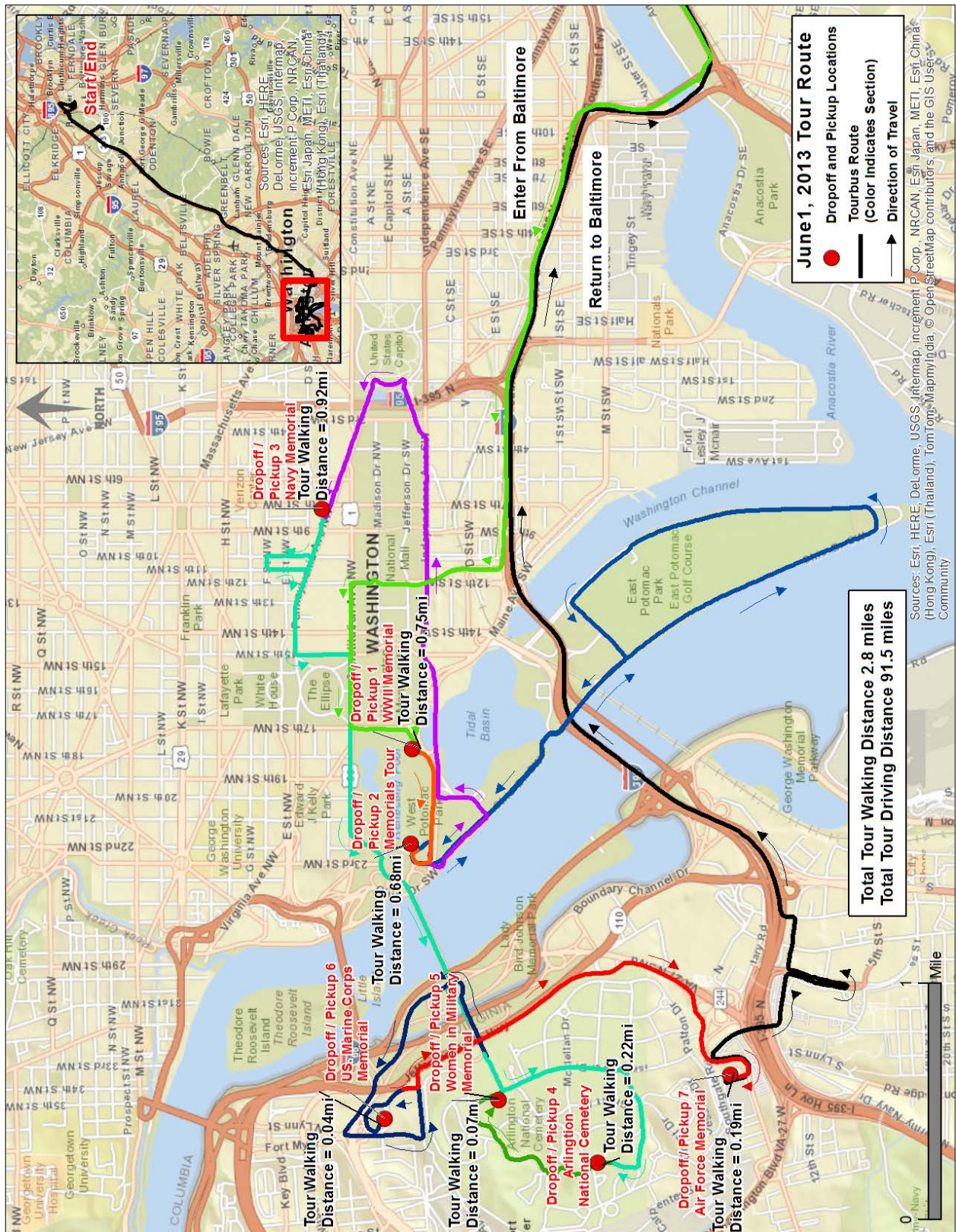
Honor Flight Group 1 — Saturday, June 1, 2013 (52 Participants from Various Places of Origin)			
Location / Activity	Start – End Time (Duration)	Site Assessment / Researcher Observations	Overheard Commentary: Speaker / Theme (Time) Comment Summary
(See Figure 3.7: Dropoff/Pickup 1)		signage and site programs. Parking was available and unloading went smoothly.	<p>what they flew, where stationed, etc. Also explaining various aspects of the memorial. Welcoming and greeting the veterans as they approach. Period music playing and artifacts on table. Others arriving carrying in wreaths. Many stopping for photos at entrance.</p> <p>Passenger / Safety (9:05 am). Encouraged veteran to step out of the sun.</p> <p>Passenger / Safety (9:07 am). Veteran talking about a medication that he needs to take. Guardian asking him if he needs to sit down.</p> <p>Volunteer / Meaning of Experience (9:12 am). She explained that she volunteers for Honor Flight arrivals. She is local to DC but volunteers specifically to greet and welcome veterans. She stated that she loves to hear their stories.</p> <p>Medical Volunteer (9:26 am). Educational. Talked about the questions that they ask veterans to hear their stories.</p> <p>Passenger / Transportation (9:28 am). Spoke about getting here from Nebraska and the trip from Nebraska to Denver where they were escorted the entire way. At each county line a different group on motorcycle would join the group to escort. Never had to stop at a light. Everyone pulls over for Honor Flight.</p> <p>Passenger / Meaning of Experience (10:11 am). Veteran spoke about Pearl Harbor. He was 17 at the time and did not think he would be involved. But he turned 18 in late December and was immediately called up. Stated that the most important aspect to him, as people were moved to different areas, was keeping his group of boys together.</p> <p>Passengers / Safety (10:20 am). Many comments about the heat and decisions to stay on bus to avoid getting overheated.</p> <p>Harley Davidson Escort / Meaning of Experience (10:36 am). He noted the pride that they take in their work and that they consider it their duty.</p>
Cruising / parking	8:59 am – 10:20 am (21 min)	Driver found parking near World War II Memorial.	
Loading / In transit	10:25 am – 10:44 am (19 min)		Group Leader / Education and Safety (10:41 am). Interpreted aspects of the Lincoln Memorial that they were about to see. Also noted how to safely reach Lincoln via elevator. Mentioned they can get off or stay on. Brought up point of staying hydrated and cool.
Korean War Veterans Memorial/ Lincoln Memorial / Vietnam Veterans	10:45 am – 12:11 pm (1 hr 26 min)	Within walking distance there are trash and recycling containers, bathrooms, water fountains, site information, waysides, directional signage, refreshments, a	Driver/ Regulations (10:46 am). "I am warning you that when I park this bus I have to shut it down and there will not be any air."

Honor Flight Group 1 — Saturday, June 1, 2013 (52 Participants from Various Places of Origin)			
Location / Activity	Start – End Time (Duration)	Site Assessment / Researcher Observations	Overheard Commentary: Speaker / Theme (Time) Comment Summary
Memorial / Unloading and Sightseeing (See Figure 3.7: Dropoff/Pickup 2)		bookstore and site programs. Loading zone crowded with other buses and pedestrians. Difficulty creating room for wheelchair lift. Emergency vehicles blocking entrance to Korean Memorial. Bus forced to circle around before unloading (after 7 minute wait). Bus stopped in zone longer than needed to unload. Idled longer than 3 min Mounted police directed buses to move on.	
Cruising / parking between sites	10:53 am – 12:11 pm (1 hr 18 min)	Driver tried to pull back to World War II parking area but it was full. Then stopped at 17 th and Constitution. Idled for over 3 min then officer flagged driver to move on. Stopped near Korean War Veterans Memorial but no space to park. Emergency vehicles were blocking the loading zone, large backup of buses. Sat waiting for 7 minutes, then bus forced to keep circling. Police observed ticketing double parked car, bus headed to Hanes Point bus parking but ended up going very slowly because it was stuck behind at least 20 bicyclists and there are no bicycle lanes. Cruised along Hanes Point. Just wasting time cruising around looking for parking or just staying out of trouble until it is time to pick up. Tons of cyclists along Hanes Point. Helps explain why they removed the parking along this area. We are following cyclists down the road. There were several spots to park but driver just passed them by and kept going. Then circled back to pick up passengers. Had to double park.	Driver/ Regulations (10:54 am). "I'm illegally parked right now. Sometimes they wave you on, sometimes they ticket." Driver/ Regulations (11:27 am). "We've got to move" (police on horseback). "He just drew me away" (police officer using hand signals to move him on). Driver / Meaning of Experience (11:30 am). "Listen...I am a vet. I owe it to these guys. The first time I did it, it was just random. After one trip I told them to sign me up for as many as possible."
Loading at Vietnam Veterans Memorial / In transit (See Figure 3.7: Dropoff/Pickup 2)	12:11 pm – 12:49 pm (38 min)	Bus stopped in zone beyond time needed to load. Unsafe loading due to double parking issue. Boxed lunches were passed out to the group. Refuse was collected by assistants to the tour leader.	Assistant to Group Leader / Education (12:15 pm). Provided the details of how Honor Flight started in conjunction with the building of the World War II Memorial. Passenger / Safety (12:18 pm). "My sister said 'Don't take dad to DC and get him lost. It will look bad on the Christmas cards.'" Assistant to Group Leader/ Meaning of Experience (12:20 pm). Mentioned that group leader quit his job as an architect to volunteer for Honor Flight. Driver / Education and Orientation (12:30 pm). Pointed out various sites along the way,

Honor Flight Group 1 — Saturday, June 1, 2013 (52 Participants from Various Places of Origin)			
Location / Activity	Start – End Time (Duration)	Site Assessment / Researcher Observations	Overheard Commentary: Speaker / Theme (Time) Comment Summary
			offering unique facts about memorials as well as explaining logistics.
U.S. Navy Memorial and Naval Heritage Center / Unloading and Sightseeing (See Figure 3.7: Dropoff/Pickup 3)	12:49 pm – 1:48 pm (59 min)	Within walking distance there are trash and recycling containers, bathrooms, water fountains, site information, waysides and directional signage and a ship's store. Idling longer than 3 min. Some passengers remained on-board, bus running with air conditioning. Boxed lunch debris thrown out. Driver parked in no parking zone. NPS ranger asked bus to move on. Circled to return and pick up passengers.	Group Leader / Meaning of Visit (1:32 pm). Spoke with group leader about how the visit affects veterans. He gave an example of a woman who called him after the trip and said that she and her husband had been married for 42 years, but it was not until Honor Flight that she even knew he served in World War II and earned a Purple Heart. Group leader mentioned that in less than a decade they went from the first trip to 127 hubs throughout the country. They have brought over 100,000 veterans to DC.
Loading / In transit	1:49 pm – 2:28 pm (28 min)	Very brief stop at National Seabee Memorial. Most passengers stayed on bus.	Driver / Educational (1:56 pm). Pointed out sites between U.S. Navy Memorial and Arlington National Cemetery. Group Leader / Educational (2:22 pm). Talked about the frequency of burials, the fact that Honor Flight gets an escort and special arrival allowances for Honor Flight. Also mentioned that The Old Guard never stops. Even during 4 feet of snow and during hurricane weather, they declined to stop.
Arlington National Cemetery / Unloading and Sightseeing (See Figure 3.7: Dropoff/Pickup 4)	2:29 pm – 3:43 pm (1 hr 14 min)	The site has trash and recycling containers, bathrooms, water fountains, site information, waysides, directional signage, a welcome center, a bookstore and site programs. Idling longer than 3 min. Unloading was calm and orderly. Pre-teen passengers got off first and handed water to veterans. Once off bus, everyone was looking for shade, weather was extremely warm, everyone standing and silent during the Changing of the Guard ceremony. Security personnel on duty to make sure visitors are respectful. Bus was permitted to unload within the cemetery but then had to move to an alternative location. Onsite cemetery transit system was not used. Most seem to be appreciative of this ceremony.	
Loading / In transit	3:44 pm – 3:58 pm (12 min)	Bus took extra time to load due to wheelchairs.	Passenger / Weather (3:46 pm). Some passengers talking about heat and wanting showers. Passenger / Meaning of Visit (3:50 pm). "He is not just my father. He is my hero and my friend." Passenger / Transportation and Physical Comfort (3:51 pm). "The beep sound while unloading and loading is too loud."

Honor Flight Group 1 — Saturday, June 1, 2013 (52 Participants from Various Places of Origin)			
Location / Activity	Start – End Time (Duration)	Site Assessment / Researcher Observations	Overheard Commentary: Speaker / Theme (Time) Comment Summary
			Group Leader / Education (3:57 pm). Additional interpretation of cemetery provided on board. Group Leader / Meaning of Visit (3:58 pm). Mentioned special shuffle step that is/was done for Honor Flight during the Changing of the Guard. No longer allowed but group leader noted that he saw small foot drag that he thinks is a tribute, kind of a half shuffle.
Women in Military Service for America Memorial / Unloading and Sightseeing (See Figure 3.7: Dropoff/Pickup 5)	3:58 pm – 4:26 pm (28 min)	Within walking distance there are trash and recycling containers, bathrooms, water fountains, site information, waysides, directional signage and a bookstore. Very warm and uncomfortable on the bus. "It looks like everyone is wilting."	Group Leader / Meaning of Visit (4:00 pm). Mentioned this was a special stop off the itinerary to honor women veterans with group. Passenger / Recreation (4:01 pm). "Are they breaking out the champagne now?"
Loading / In Transit	4:27 pm – 4:39 pm (12 min)		Group Leader / Safety and Education (4:34 pm). While in transit, mentioned that people fall and get injured all the time at Iwo Jima because the pavers are in disrepair. Suggested that veterans do not get off. Said they have had two significant injuries, including a hospital visit, because of falls at this site. Gave other details about the memorial.
Marine Corps War Memorial (i.e., Iwo Jima Memorial) / Unloading and Sightseeing (See Figure 3.7: Dropoff/Pickup 6)	4:40 pm – 4:47 pm (7 min)	Within walking distance there are portable bathrooms, waysides and directional signage. Brief stop. Many veterans and assistants elected to stay on the bus. Bus stopped in zone longer than needed to unload.	
Loading / In transit	4:48 pm – 4:58 (10 min)		
U.S. Air Force Memorial / Group photo (See Figure 3.7: Dropoff/Pickup 7)	4:59 pm – 5:33 pm (34 min)	Within walking distance there are trash containers and waysides. All passengers unloaded for a group photo. Assistants preceded vets in order to assist unloading. Bus stopped in zone longer than needed to unload.	
Loading / In transit	5:34 pm – 6:41 pm (1 hr 7 min)	All veterans applauded the tour. Once in transit, everyone fairly quiet and appeared worn out.	
Golden Corral Restaurant in Baltimore / Dinner	6:42 pm – 7:58 pm (1 hr 17 min)		
Loading / In transit	7:59 pm – 8:08 pm (9 min)		Group Leader / Orientation (8:07 pm). Final note of thanks to veterans and driver. Asked veterans to spread the word to others about Honor Flight. Mentioned that he will send out the passenger roster next week.
Final destination: Hilton Baltimore BWI Hotel	8:10 pm		

FIGURE 3.7: TOUR ROUTE — HONOR FLIGHT 1, SATURDAY, JUNE 1, 2013



3.7.3 Photographic Documentation

PHOTO 3.15: VETERANS BEING HONORED AT THE WORLD WAR II MEMORIAL



PHOTO 3.16: YOUNGEST HONOR FLIGHT TOUR MEMBER REMINDING VISITORS ABOUT SILENCE AND RESPECT



PHOTO 3.17: "HE IS NOT JUST MY FATHER. HE IS MY HERO AND MY FRIEND."



PHOTO 3.18: THE ONE FEMALE VETERAN ON TOUR WITH HER ASSISTANT



PHOTO 3.19: GROUP PHOTO AT THE U.S. AIR FORCE MEMORIAL

3.8 HONOR FLIGHT GROUP 2 — SATURDAY, SEPTEMBER 14, 2013

3.8.1 Overview

The weather was warm and the afternoon heat was a bit exhausting to the older veterans and their escorts. The day started with enthusiasm that was enhanced by an honor paid to the veterans by a volunteer motorcycle escort into Washington, DC. Traffic was light on this Saturday morning, but access to the first planned site (World War II Memorial) was denied due to street closures associated with a marathon race being held that day. A revised itinerary was developed and followed. Enforcement of no parking areas and no unloading/loading zones appeared to be suspended for the day, and drivers had no trouble getting close to each site to be visited by the group. Unloading or loading generally took a minimum of 10 minutes. Following the no idling rule was a created a problem for passengers who chose to stay on the bus when too exhausted to disembark and visit a site. The lack of air conditioning and air movement on the parked buses exacerbated their fatigue and discomfort. The only time that a safety concern was raised was during the visit to the Marine Corps Memorial which is not able to accommodate many tour buses and, with the presence of active service vehicles, presents maneuvering challenges to large vehicles and accessibility challenges for bus passengers who have ambulatory constraints. The tour route was a total of 112 driving miles with participants walking 2.17 pedestrian miles (Figure 3.8).

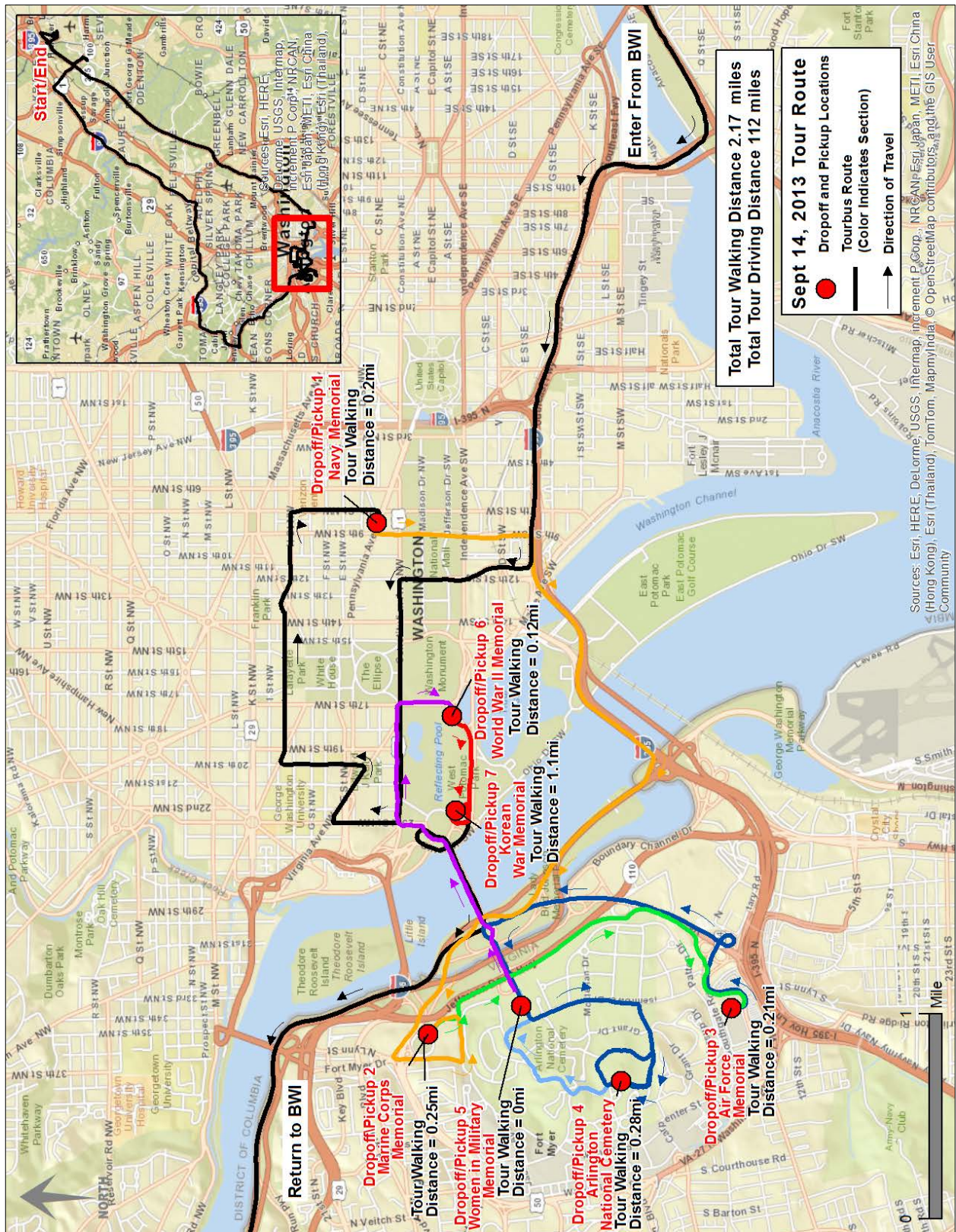
3.8.2 Documented Activities, Site Assessment, Researcher Observations and Overheard Commentary

TABLE 3.8: HONOR FLIGHT GROUP 2 — DOCUMENTED ACTIVITIES, SITE ASSESSMENT / OBSERVATIONS, COMMENTS

Honor Flight Group 2 — Saturday, September 14, 2013 (109 Participants from Various Places of Origin)			
Location / Activity	Start – End Time (Duration)	Site Assessment / Researcher Observations	Overheard Commentary: Speaker / Theme (Time) Comment Summary
Hilton Baltimore BWI Hotel / Loading	7:59 am – 8:20 am (21 min)	Trash containers available as loading. Orderly loading of Honor Flight veterans and assistants.	Volunteer / Mobility (8:17 am) Concern about accommodations for disabled passengers to load and unload. Passenger / Recreational Aspects of Visit (8:15 am) Everyone seemed very excited about motorcycle escort.
Leave hotel / in transit to DC	8:20 am – 9:33 am (1 hr 13 min)	Five volunteer veterans on motorcycles acted as escorts, leading the buses from hotel to DC.	Group Leader / Regulations and Enforcement (9:12 am) Bewilderment over police closure of only access to World War II Memorial. Passenger / Traffic Conditions (9:17 am) dismay at closure of streets for marathon event without apparent notification to bus companies Driver / Regulations and Enforcement (10:04) "We'll make some illegal left turns, but we'll do what we gotta do." Group Leader / Safety and Security (9:22 am) "Because of marathon, roads are blocked and World War II is not accessible until 11:30 am We'll change the plan."
U.S. Navy Memorial and Naval Heritage Center / Unloading and Sightseeing (See Figure 3.8: Dropoff/Pickup 1)	9:33 am – 10:25 am (52 min)	Within walking distance there are trash and recycling containers, bathrooms, water fountains, site information, waysides and directional signage. Although parking was not permitted in front of the memorial, the buses parked there for the entire stop without being challenged by police/security.	
In transit	10:25 am – 10:52 am (27 min)	Traffic was moderate, but tight turns presented challenges in maneuvering large buses (especially at the site)	
Marine Corps War Memorial (i.e., Iwo Jima Memorial) / Unloading and Sightseeing (See Figure 3.8: Dropoff/Pickup 2)	10:52 am – 11:07 am (15 min)	Congested area. No parking available for buses. Buses had to drive in reverse and double park to unload and load passengers. Too little time for all passengers to visit the site.	Group Leader / Traffic Conditions (10:49 am). Truck unloading wheelchairs, no place to do it without blocking traffic around memorial. Group Leader / Safety and Security (10:15 am) safety of the site for vets and seniors. the ground of the site is not safe and do not let all vets to get off the bus
In transit / U.S. Air Force Memorial / Unloading (See Figure 3.8: Dropoff/Pickup 3)	11:07 am – 11:24 am (17 min)	Easy access to site. Good unloading area. Adequate on-site parking for extended stay.	
U.S. Air Force Memorial / Group Photo / Lunch	11:24 am – 12:20 pm (56 min)	Group was organized for a group photo and then boxed lunches were provided and consumed onsite. Seating along low wall was adequate, but not enough table tops for those who could	Passenger / Resource Aspects of Visit (12:22 pm) More restrooms should be available. Only two stalls for 100 people. Navy Memorial had a nice restroom but here is so bad.

Honor Flight Group 2 — Saturday, September 14, 2013 (109 Participants from Various Places of Origin)			
Location / Activity	Start – End Time (Duration)	Site Assessment / Researcher Observations	Overheard Commentary: Speaker / Theme (Time) Comment Summary
		not balance their food on their laps while eating.	
In transit to Arlington National Cemetery	12:20 pm – 12:35 pm (15 min)	Group leader shared in-depth information about the cemetery and the Changing of the Guard ceremony.	
Arlington National Cemetery / Changing of the Guard / Tomb of the Unknown Soldier / Unloading and Sightseeing (See Figure 3.8: Dropoff/Pickup 4)	12:35 pm – 1:31 pm (56 min)	Veterans had special seating area to view the Changing of the Guard ceremony, but it was in the bright sun (uncomfortably hot).	
In transit	1:31 pm – 1:45 pm (14 min)		
Women in Military Service for America Memorial (See Figure 3.8: Dropoff/Pickup 5)	1:45 pm – 2:05 pm (20 min)	Very brief stop at Memorial, but unloading zone and parking was too far away. Most passengers stayed on bus.	
In transit	2:05 pm – 2:19 pm (14 min)	Traffic flowing smoothly. Parking available at the World War II Memorial.	
World War II Memorial / Unloading and Sightseeing (See Figure 3.8: Dropoff/Pickup 6)	2:19 pm – 3:55 pm (36 min)	Unloading/parking very close to memorial. Youth “honor squad” greeted veterans. Convenient restroom facilities, although line to get in with wheelchairs. Trash and recycling containers, bathrooms, water fountains, site information, waysides, directional signage at the site. After circling the monument, most looked for a shady spot in which to reflect on the experience.	Passenger / Traffic Conditions (4:02) Frustration at confusion and inability to handle volume of buses loading.
In transit / Unloading (See Figure 3.8: Dropoff/Pickup 7)	3:55 pm – 4:12 pm (17 min)	Driver unloaded at Korean War Veterans Memorial and parked beyond time permitted.	Group Leader / Safety and Security (4:06 pm). Caution when crossing the street. It is dangerous spot. There was an accident in the past that a person hit by a taxi while crossing the street.
Lincoln Memorial / Korean War Veterans Memorial / Vietnam Veterans Memorial	4:12 pm – 5:19 pm (1 hr 7 min)	Several passengers stayed on the bus, but air conditioning was not active. Uncomfortable.	Passenger / Resource Aspects of Visit (5:28 pm) Want to see more trash cans along with the path. Too few trash cans.
In transit to Golden Corral	5:19 pm – 6:46 (1 hr 27 min)		
Golden Corral Restaurant in Baltimore / Dinner	6:46 pm – 7:50 pm (1 hr 4 min)	Special bus unloading behind the restaurant, and separate entrance for the group.	
In transit to BWI Hilton hotel	7:50 pm – 8:00 pm (10 min)	Once in transit, everyone fairly quiet and appeared worn out.	
BWI Hilton Hotel / Unloading	8:00 pm – 8:15 pm (1 hr 17 min)	Orderly and safe unloading at hotel.	

FIGURE 3.8: TOUR ROUTE — HONOR FLIGHT 2, SATURDAY, SEPTEMBER 14, 2013



3.8.3 Photographic Documentation

PHOTO 3.20: BUS UNLOADED AND LOADED IN A NON-DESIGNATED ZONE BY THE U.S. NAVY MEMORIAL.



Bus remained parked on street during the entire stop.

PHOTO 3.21: EXCELLENT TURNAROUND AND PARKING AT THE U.S. AIR FORCE MEMORIAL.



APPENDIX A: ON-VEHICLE COVER SHEET



Survey Name:	ON-Vehicle Cover Sheet
Description:	Fill this out once for the whole day
Introduction:	Welcome to the survey. Touch the Start button to continue
Conclusion:	Thank you for completing the survey
Survey Created by:	George Mason University
Survey Created on:	11/13/2012 4:36:28 PM

Survey Questions and Flow

Question Type	Question	Settings	Statements	Answers/Ratings	Next Question
1: Text	Researcher name	° Answer Required			2
2: Numeric	Height	° Answer Required ° Decimal Places-1			3
3: Numeric	Weight	° Answer Required ° Decimal Places-2			4
4: Numeric	Age	° Answer Required			5
5: Single Select	Sex	° Answer Required	Male Female		6 6 6
6: Date	Date	° Answer Required			7
7: Single Select	Day of the week	° Answer Required	Sunday Monday Tuesday Wednesday Thursday Friday Saturday		8 8 8 8 8 8 8
8: Time	Start Time				9
9: Text	Start locations	° Answer Required			10
10: Numeric	Approximate Temperature	° Answer Required			11
11: Multi Select	Weather	° Answer Required ° Min Answers-1	Sunny Partly Sunny Cloudy Light Precip (Rain/Snow) Heavy Precip (Rain/Snow)		12
12: Text	Weather Comments				13
13: Multi Select		° Answer Required ° Specify Answer	Private small four bus (1-15		14

Question Type	Question	Settings	Statements Answers/Ratings	Next Question
		° Min Answers-1	passengers) Private medium tour bus (16-40 passengers) Private large tour bus (41+ passengers) Public transport bus Sightseeing bus (e.g. open-top, 2-deck, trolleys, etc.) NPS visitor bus School bus of any size If other, please take a photo If other, please take a photo & indicate the photograph # here Other type of bus	
14: Text	Bus Company OR School bus/group name	° Answer Required		15
15: Numeric	Full DOT #	° Answer Required		16
16: Text	Last 3 digits of LICENSE PLATE	° Answer Required		17
17: Text	Name of Group or Primary Affiliation	° Answer Required		18
18: Single Select	Was a professional guide part of the tour group?	° Answer Required	Yes No	19 19 19
19: Numeric	Number of group leaders (excluding professional guides)	° Answer Required		20
20: Single Select	Type of Group	° Answer Required ° Specify Answer	School Group Cultural Group Honor Flight General Tour Other (Describe)	21 21 21 21 21
21: Text	Number of Pre-teens (0-12 yrs) in the group?	° Answer Required		22
22: Text	Number of Teens (13-18 yrs) in the group?	° Answer Required		23
23: Text	Number of Adults (19-60 yrs) in the group?	° Answer Required		24
24: Text	Number of Seniors (60+ yrs) in the group?	° Answer Required		25
25: Numeric	How many group members used any sort of assistive device (e.g., cane, wheelchair, stroller)	° Answer Required		26
26: Text	If assistive devices used, what type of devices were used?			27
27: Single Select	Any language besides English spoken from members of the group?	° Answer Required	Yes No	28 28 28
28: Text	If yes to above question, please mention the languages used.			Conclusion

APPENDIX B: ACTIVITY SHEET



Survey	Activity Sheet
Description:	Complete a new sheet for each activity
Introduction:	Welcome to the Activity Sheet. Touch the Start button to continue
Conclusion:	Thank you for completing the survey
Survey Created	George Mason University
Survey Created	11/15/2012 10:29:54 PM

Survey Questions and Flow

Question Type	Question	Settings	Statements Answers/Ratings	Next Question
1: Time	Start Time of each event			2
2: Single Select	Bus Activity	^a Answer Required ^a Specify Answer	Unloading Loading Parked In Transit Cruising (Empty) Other/Onsite Activity (Describe)	3 3 3 3 3 3
3: Text	Start Point	^a Answer Required		4
4: Single Select	If in motion, how congested is traffic?	^a Specify Answer	Not at all congested (i.e., free flowing) Moderately congested Very congested Other	5 5 5 5
5: Text	If congested, what appears to be the cause of congestion or delay?			6
6: Multi Select	ALL operational / behavioral issues observed, (Select all that apply.)	^a Answer Required ^a Specify Answer ^a Min Answers-1	Bus stopped in zone beyond time needed to load/unload Bus pulling into traffic in dangerous way Bus blocking pedestrian traffic Bus blocking bicycle lane Bus blocking facility entrance Double parking Unloading/loading in a non-designated loading zone Unloading/loading on roadside (rather than curbside) Driver talking/texting on cellular phone Idling more than 3 minutes Unsafe behaviors on bus (e.g., passengers standing while in transit) None of the above Other (Describe – e.g., driver behaviors when stopped/parked)	7

Question Type	Question	Settings	Statements Answers/Ratings	Next Question
7: Multi Select	Loading/unloading behaviors of passengers. (Select all that apply.)	° Answer Required ° Specify Answer ° Min Answers-1	Unsafe entering/exiting of bus Trash dumped Soil compaction (Not using walkways) Viewed interpretive signage (e.g., wayside, educational, interpretive) Viewed directional signage (e.g., way-finding) Other (Describe additional behaviors)	8
8: Multi Select	Place Assessment. (Select all that apply.)	° Answer Required ° Specify Answer ° Min Answers-1	Trash containers Recycling containers Waysides Directional signage NPS Ranger Other (Describe additional surroundings)	9
9: Multi Select	Activities passengers engaged in at the site. (Select all that apply.)	° Answer Required ° Specify Answer ° Min Answers-1	Ranger program Site program Eating Group photos General sightseeing Other (Describe additional activities)	10
10: Information	At end of activity, make notations of Distance, Calories.			11
11: Numeric	Distance	° Answer Required ° Decimal Places-1		12
12: Numeric	Calories	° Answer Required		13
13: Time	End Time			14
14: Text	End Point	° Answer Required		15
15: Text	Comments			Conclusion

APPENDIX C: OVERHEARD COMMENTARY SHEET



Survey Name:	Overheard Commentary Sheet
Description:	Complete throughout the day
Introduction:	Welcome to the Overheard Commentary Sheet. Touch the Start button to continue
Conclusion:	Thank you for completing the survey
Survey Created by:	George Mason University
Survey Created on:	11/15/2012 11:08:21 PM

Survey Questions and Flow

Question Type	Question	Settings	Statements	Answers/Ratings	Next Question
1: Time	Time				2
2: Single Select	Bus On/Off		On Off		3 3
3: Single Select	Who made the comment?	^a Specify Answer	Driver Passenger Group Leader Tour Guide NPS Ranger Other (Describe)		4 4 4 4 4 4
4: Text	Approximate Location				5
5: Single Select	Comment theme	^a Specify Answer	Traffic conditions Mobility (Ability to get around) Accessibility (Access / Barriers to site) Directions / Orientation / Signage / NPS App Safety / Security (Safe havens, Disasters) Educational aspects of visit Recreational aspects of visit Resources aspects of visit (e.g., trees, grass, etc.) Regulations / Enforcement Other (Describe)		6 6 6 6 6 6 6 6 6 6
6: Text	Summarize comment	^a Answer Required			Conclusion

APPENDIX D: PHOTOLOG



Survey Name:	Photolog
Description:	Use for taking Pictures
Introduction:	Welcome to the Photolog. Touch the Start button to continue.
Conclusion:	Thank you for completing the survey
Survey Created by:	George Mason University
Survey Created on:	11/29/2012 6:08:20 PM

Survey Questions and Flow

Question Type	Question	Settings	Statements Answers/Ratings	Next Question
1: Photo Capture	Please capture a picture	<ul style="list-style-type: none"> ▫ Answer Required ▫ Min Answers-1 ▫ Max Answers-1 		2
2: Text	Please add your comments regarding the location and why you took the picture.			Conclusion