

Pelham Replacement Project: Campus Plan Amendment
Remaining Residential/Campus Life Gross Floor Area (GFA) Under 2000 Campus Plan

Total GFA under 2000 Campus Plan (Academic/Administrative & Residential/Campus Life)	320,000
Academic/Administrative GFA	(30,000)
Residential/Campus Life GFA under 2000 Campus Plan	290,000
Total Residential/Campus Life GFA under 2000 Campus Plan	290,000
Projects Already Constructed under 2000 Campus Plan*	(70,000)
Available Residential/Campus Life GFA under 2000 Campus Plan	220,000
Available Residential/Campus Life GFA under 2000 Campus Plan	220,000
Pelham Replacement Project	(92,761)
Remaining Residential/Campus Life GFA under 2000 Campus Plan**	127,239

* Includes Somers Hall Expansion (45,000 s.f. GFA) and Athletic/Parking Facility (25,000 s.f. GFA)

** GFA remaining after construction of the proposed Pelham Replacement Project. Includes Ames Hall Expansion, Hillside 1 & 2, and the Athletic Center (fitness center addition)



symmetra design

The George Washington University Mount Vernon Campus Pelham Replacement Project

Washington, DC

Traffic Impact Study

May 23, 2007



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EXECUTIVE SUMMARY

The following report is a Traffic Impact Study for the proposed Pelham Replacement Project located on the George Washington University's Mount Vernon Campus at 2100 Foxhall Road in Northwest Washington, D.C. The Project is being planned to enhance the quality of life on campus for students by providing additional undergraduate student housing and improved residential/campus life support space. Specifically, the Project will include approximately 300 beds and approximately 50,000 SF of below grade building and residential/campus life support space, including a proposed dining facility. The Project will also include a central delivery facility with improved access for delivery vehicles. The central delivery facility will be accessed via a proposed secondary campus access on Whitehaven Parkway (located just west of the existing primary campus entrance). The Project is planned to be complete in fall 2010.

The following Traffic Impact Study includes an assessment of AM and PM peak hour traffic for Existing conditions and Future traffic conditions with the Proposed Pelham Replacement Project.

Existing traffic conditions were determined by counting existing peak period traffic volumes and pedestrian activity. Future traffic conditions were determined by projecting traffic generated by the proposed Pelham Replacement Project, plus other planned projects in the area. Traffic associated with the proposed Pelham Replacement Project was estimated based on the existing (high) student usage of the Vern Express shuttle service, plus available student parking supply and utilization.

The results of the Existing conditions analysis revealed that all the study area intersections currently operate at acceptable Levels of Service (with the exception of W Street/ MacArthur Boulevard during the AM peak hour). (NOTE: An additional analysis was performed at the W Street/ MacArthur Boulevard intersection for the AM peak hour using volumes that travel through the intersection less existing traffic that is associated with the Mount Vernon Campus. The analysis indicated that the intersection would operate at a LOS "F" even without MVC related traffic.)

All of the study area intersections that operated within acceptable levels during background conditions will continue to operate at acceptable Levels of Service with the addition of the Pelham Replacement Project. The W Street/MacArthur Boulevard intersection will continue to operate at a LOS "F" during the AM peak hour, but notably with no increase in delay as compared to background conditions. The Pelham Hall project will have no adverse impact on the study area intersections.

The Mount Vernon Campus has adequate parking supply to meet the projected peak hour parking demand. Therefore the Pelham Replacement Project will have no adverse impact on the study area due to traffic or parking.

INTRODUCTION

The following report is a Traffic Impact Study for the proposed Pelham Replacement Project located on the George Washington University's Mount Vernon Campus at 2100 Foxhall Road in Northwest Washington, D.C. Figure 1 shows the project site location map.

The proposed Pelham Replacement Project is planned to be located at the site of the existing Pelham Hall, a 78-bed undergraduate residence hall. The Pelham Replacement Project will enhance the quality of life on campus for students by providing additional undergraduate student housing and improved residential/campus life support space. Specifically, the Project will include approximately 300 beds and approximately 50,000 SF of below grade building and residential/campus life support space, including a proposed dining facility. The Project will also include a central delivery facility with improved access for delivery vehicles. The central delivery facility will be accessed via a proposed secondary campus access on Whitehaven Parkway (located just west of the existing primary campus entrance). The Project is planned to be complete in fall 2010. Figure 2 shows the Pelham Replacement Project site plan.

Scope of Study

This study includes an assessment (Level of Service analysis) of Existing and Future traffic conditions for the AM and PM peak hours. The study area for this project was confirmed by the District Department of Transportation and includes the following intersections:

- Foxhall Road/Whitehaven Parkway (signalized)
- Foxhall Road/W Street (unsignalized)
- Whitehaven Parkway/Existing Campus Entrance (unsignalized)
- Whitehaven Parkway/MacArthur Boulevard (unsignalized)
- W Street/MacArthur Boulevard (unsignalized)
- Proposed Secondary Campus Access/Whitehaven Parkway (unsignalized)

Note: The W Street/Campus Entrance was not included as part of the study area since its use is limited and controlled pursuant to the Mount Vernon Campus Plan Order (BZA No. 16505).

This study also includes report sections on parking conditions, shuttle operations, pedestrian facilities and loading.

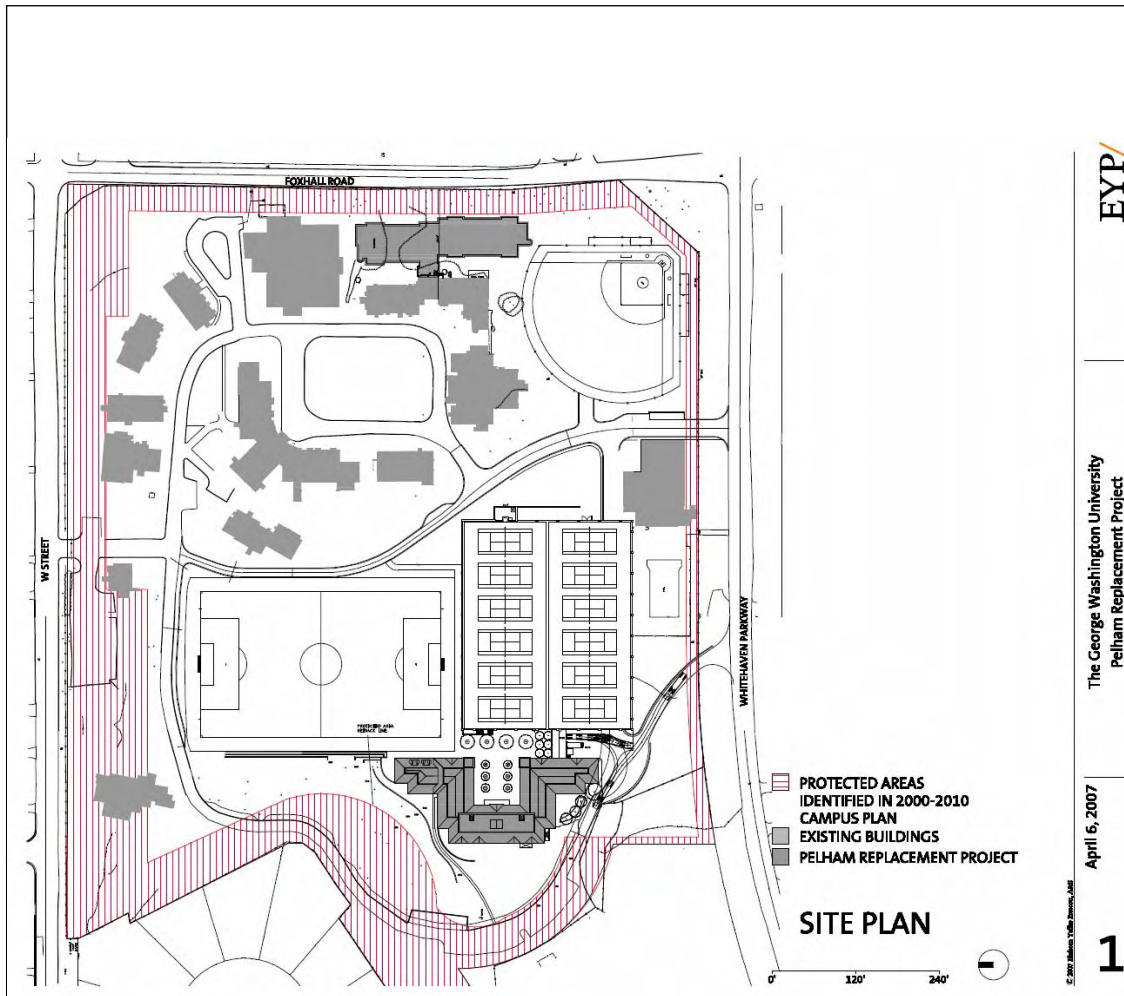
Figure 1
Site Location Map



BACKGROUND

As of Fall 2006 the Mount Vernon Campus community included 923 students (496 resident students and 427 non-resident students) and 130 faculty and staff (121 live off campus and nine live on campus). By 2010 the resident student population is expected to increase by approximately 209 students. The Project is not anticipated to result in any significant changes to existing non-resident student, faculty and staff populations. The student population will remain within the caps established in the approved Mount Vernon Campus Plan. The resident student population will decrease slightly (by 78 resident-students) during the construction period as the existing Pelham Hall is being replaced in its entirety by the Pelham Replacement Project.

Figure 2
Pelham Replacement Project Site Plan



EXISTING CONDITIONS

Roadway Network

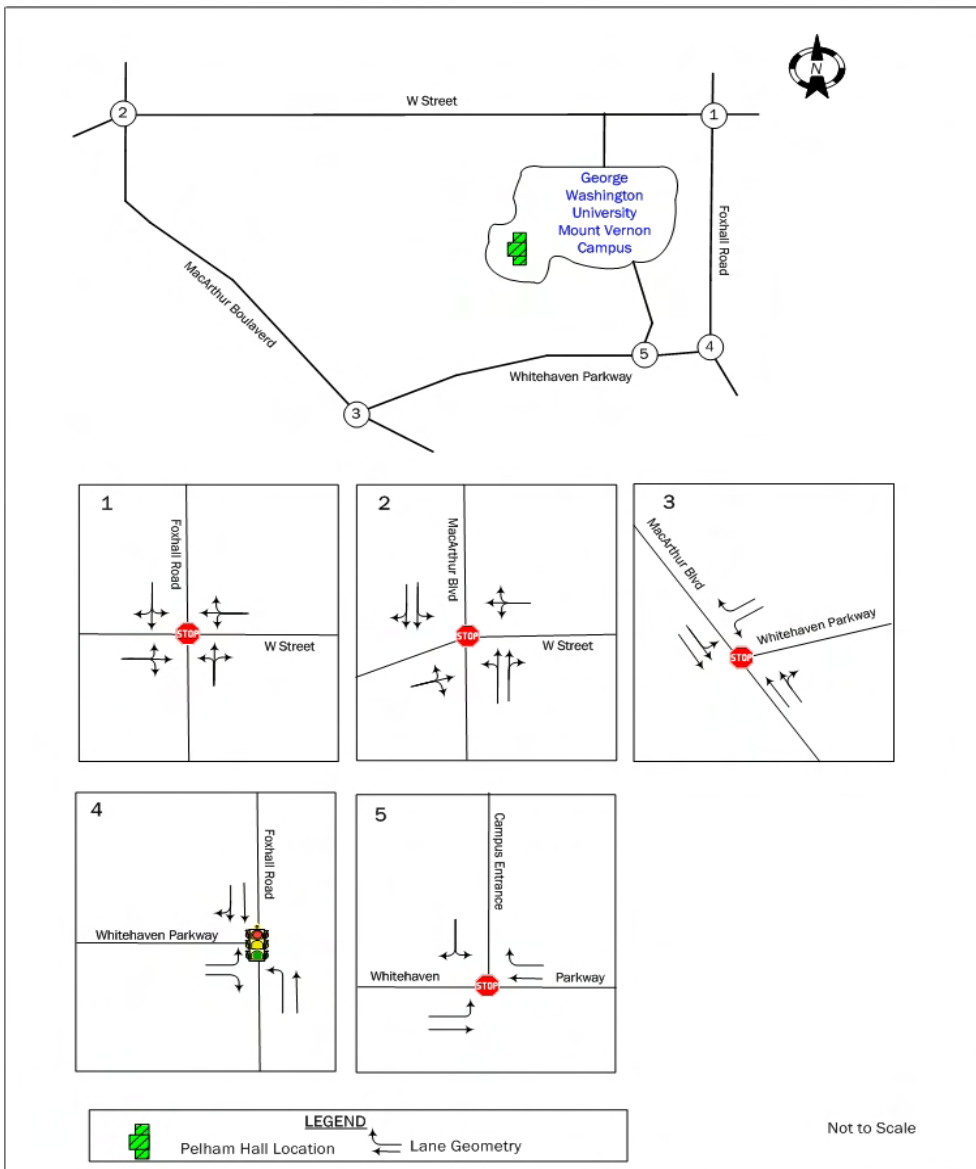
The roadways included as part of the GW Mount Vernon Campus Pelham Replacement Project study are described below:

- W Street is a two-lane east-west local road which extends from Foxhall Road to MacArthur Boulevard.
- Whitehaven Parkway is a two-lane east-west local road that extends from Foxhall Road to MacArthur Boulevard.

- Foxhall Road is a three-lane north-south minor arterial which extends from Nebraska Avenue NW to MacArthur Boulevard NW.
- MacArthur Boulevard is a four-lane north-south principal arterial that extends from Canal Road NW to north of Loughboro Road NW and terminates at Clara Barton Parkway in Maryland.

The roadway network and lane configurations are shown schematically in Figure 3.

Figure 3
Existing Roadway Network and Lane Configurations



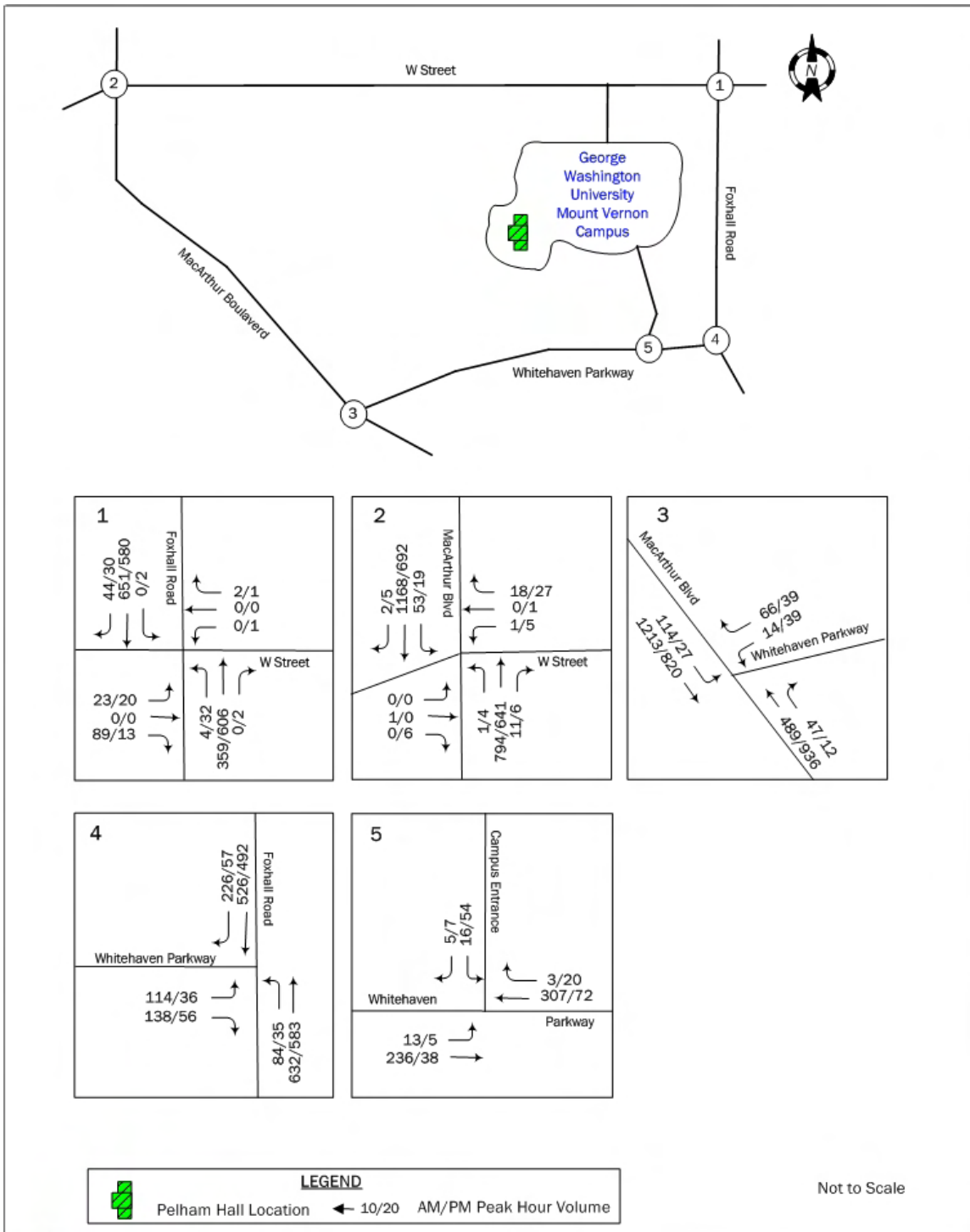
Traffic Volumes and Field Observations

Traffic data (turning movement counts) and field observations were conducted on Wednesday March 22, 2006 and Thursday March 23, 2006 from 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM. Counts were conducted at the five intersections outlined in the Scope of Study. Based on the data collected during these time periods, the peak hours were determined to be 7:30 AM to 8:30 AM and 5:00 PM to 6:00 PM. Field observations revealed that traffic operated under good conditions during both the AM and PM peak periods at all five study area intersections. Peak hour traffic data is shown in Figure 4.

An additional traffic count was conducted on Thursday February 8, 2007 along the campus perimeter road to the southern end of Hand Chapel. Mostly Mount Vernon Campus facilities and security vehicles use the Perimeter Road. The count revealed three northbound and five southbound trips during the AM and PM peak periods. The Perimeter Road traffic count was used as the basis for projecting future traffic conditions on the proposed secondary campus access road.

Additional field observations were conducted on Thursday March 22, 2007 from 7:30 AM to 8:30 AM and 2:30 PM to 4:30 PM to ascertain future interaction between the St. Patrick's Day School Carpool Initiative and the proposed Secondary Campus Access on Whitehaven Parkway. Our observations revealed that during both morning drop-off and evening pick-up vehicles queued in the westbound curb lane on Whitehaven Parkway to access the St Patrick's School driveway. Two DC police officers (hired by the St. Patrick's School), one at the driveway entry point and the other at the exit point, were on site directing both vehicular and pedestrian traffic.

Figure 4
Existing Traffic Volumes



Traffic counts at the existing campus entrance on Whitehaven Parkway were used to determine existing University trip generation. The University currently generates 37 AM peak hour trips and 86 PM peak hour trips. Existing trip generation for the University is summarized in Table 1 below.

Table 1
GW Existing Vehicle Trip Generation
 (Based on existing traffic volumes)

AM Peak			PM Peak		
IN	OUT	TOTAL	IN	OUT	TOTAL
16	21	37	25	61	86

Capacity Analysis

Existing conditions Level of Service (LOS) capacity analyses were conducted for the five study area intersection using SYNCHRO 6 software. Capacity analyses results can range from LOS “A” (best) to LOS “F” (worst) based on the average delay experienced by motorists. LOS “D” and “E” are typically accepted by the District Department of Transportation (DDOT) as the delay threshold limits for intersections.

The results of the LOS analyses are summarized in Table 2 below:

Table 2
Existing Conditions Level of Service

I.D	INTERSECTION	AM Peak		PM Peak	
		LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
1	Foxhall Road/W Street*	D	32.9	D	30.1
2	W Street/MacArthur Boulevard*	F	55.6	B	14.8
3	Whitehaven Parkway/MacArthur Boulevard*	C	17.0	E	39.0
4	Foxhall Road/Whitehaven Parkway	A	7.7	B	12.1
5	Whitehaven Parkway/Campus Entrance*	C	16.2	A	9.5

* Unsignalized intersection - LOS reflects worst minor approach

As Table 2 indicates, four out of the five intersections currently operate at acceptable Levels of Service during both the AM and PM peak hours. The W Street/MacArthur Boulevard intersection operated at an acceptable LOS during the PM peak hour and a LOS “F” during the AM peak hour. (NOTE: An additional analysis was performed at the W Street/ MacArthur Boulevard intersection for the AM peak hour using volumes that travel through the intersection less existing traffic that is associated with the Mount Vernon Campus. The analysis indicated that the intersection would operate at a LOS “F” even without MVC related traffic.)

Parking

The Mount Vernon Campus has 250 parking spaces located throughout the campus. The parking spaces are used by students, faculty/staff and visitors.

The allocation of parking spaces on campus is summarized in Table 3 below. The allocation is approximate and subject to change.

Table 3
Existing Parking Allocation

Population	Allocation of Parking Capacity	Percent of Total Parking Capacity
Students	54	22%
Faculty/Staff	130	52%
Visitors	36	14%
Lab School ^a	30	12%
Total	250	100%

Note: Although the student population has been allocated 54 spaces, only 18 students have parking permits for the current academic year.

Students with semester parking are required to use the Whitehaven Parkway entrance to enter and exit the campus. The visitors' parking lot is operated by parking meters which are enforced on weekdays from 7:00am to 7:00pm (free of charge outside of these hours/days). Pursuant to the Mount Vernon Campus Plan Order, students, faculty/staff and visitors to the Mount Vernon Campus are not permitted to park on the streets adjacent to the campus. The Parking Garage is attended on weekdays from 7:00am to 10:00pm at a cost of \$1.50/hour with a maximum of \$10.00 (free of charge outside of these hours/days).

A parking occupancy survey was conducted on campus on Wednesday, May 3, 2006 at 10:00 am. The results of the parking survey indicated that 100 parking spaces or 40% of the total parking supply was occupied. The survey indicates there is more than ample parking available on campus.

^a On September 1, 2006, the Lab School of Washington entered into an agreement with the George Washington University which calls for the allocation of 30 spaces in the parking garage on the Mount Vernon Campus to be used by Lab School faculty and staff during weekdays for a monthly fee of \$100 per space per month. In the event that the parking garage reaches capacity (which has not happened to date), MVC parking operations can accommodate an additional 15 vehicles in attendant-assisted (tandem/stacked) spaces. The Lab School agreement expires on August 31, 2011 and can be terminated by GW prior to that date.

Shuttle Operations

The Vern Express is a free shuttle service that provides mobility between GW's Mount Vernon and Foggy Bottom campuses for students, faculty/staff, visitors and the MVC community. The Vern Express runs regularly (24 hours/7 days a week) during the academic year. On weekdays it departs the Mount Vernon Campus every 30 minutes from midnight to 6:00am, every 15 minutes from 6:00am to 7:00am, 5 to 10 minutes from 7:00am to 9:00pm and every 15 minutes from 9:00pm to midnight. On weekends it departs Mount Vernon Campus every 15 minutes from midnight to 2:00am, every 30 minutes from 2:00am to 8:00am and every 15 minutes from 8:00am to midnight.

The minimum number of seats on each bus is 21 and a maximum capacity of 35 for those equipped with handrails to allow for standing. The average travel time between campuses is typically seven to ten minutes, and 15 minutes during congested traffic periods. The shuttle's primary Foggy Bottom campus stops are at 21st & H St (Marvin Center) from 6:00am to 10:00am on weekdays, and 23rd and H Streets at all other times. On the Mount Vernon Campus, the Vern Express makes three stops, The Quad, across from Somers Hall (primary location), the Clock Tower and the Webb Building.

During the 2005-2006 academic year ridership on the Vern Express was 581,189. Thus far, the 2006-2007 academic year has seen a 21% increase in ridership. The University will continue to manage the fleet to efficiently service demand without utilizing more buses than necessary at non-peak hours.

Loading Activity

The existing primary loading dock on campus is located on Campus Drive at the Ames Dining Hall. The current loading dock has inadequate space for maneuvering and does not have an elevator or a lift. Currently six to seven deliveries are made daily. Additional deliveries are received at individual locations on campus and not in a centralized facility. Table 4, below shows the number of deliveries, truck type and service type.

Table 4
Mount Vernon Campus Deliveries

Truck Type	Daily Deliveries	Weekly Deliveries	Type of Service
Semi-unit	1	5	Dining
Single-unit	2-3	12	Office supplies
32ft Trailer	0-1	3	Dining supplies
Mail	3	15	(UPS/FedEx/USPS)
240yd Dumpster	0-1	1	Garbage (Friday only)
Total	6- 8	36	

Pedestrian and Bicycle Access

There are no bicycle lanes existing or proposed by the DDOT in the study area. The 2006 District of Columbia Bicycle Plan rates traffic conditions for bicycling on Foxhall Road as poor and MacArthur Boulevard as fair.

There are sidewalks on the west side of Foxhall Road, south of Whitehaven Parkway. Whitehaven Parkway has side walks on its southern side, one cross walk to the west of the Campus Entrance and another one at the WhitehavenParkway/MacArthur Boulevard intersection. MacArthur Boulevard has sidewalks and cross-walks on both sides within the study area.

FUTURE CONDITIONS

Future Conditions traffic analyses include traffic associated with the Pelham Replacement Project plus other currently approved projects in the area.

Planned Background Projects

The following planned project was considered for future traffic projections:

- Phillips Estates - Located south of W Street, north of Whitehaven Parkway and adjacent to GWU Mount Vernon campus and east of Foxhall Road. Phillips Estates is planned to be developed with 34^b single-family detached houses and twelve matter of right units, (which can be constructed without further analysis or approval). Vehicular access to the Phillips Estates is proposed at a new driveway on W Street and a new signalized intersection on Foxhall Road. The project received BZA approval from the BZA in July 2005 and is scheduled to be completed by 2010.

Table 5
Trips Generated by Phillips Estates

	AM Peak			PM Peak		
	IN	OUT	TOTAL	IN	OUT	TOTAL
34 single-family detached houses	7	19	26	22	13	35

In addition to traffic associated with the Philips Estates project, existing traffic volumes are also expected to increase in the future as a result of regional growth. A conservative growth rate of one percent (1%) per year was applied to through traffic volumes on Foxhall Road and MacArthur Boulevard. Future background traffic volumes for 2010 are shown in Figure 5 below. Future background traffic analysis results are summarized in Table 6.

^b Groove/Slade Associates Revised Traffic Impact Analysis, Phillips Estates, January 13, 2005.

Figure 5
Future Background Traffic Volumes

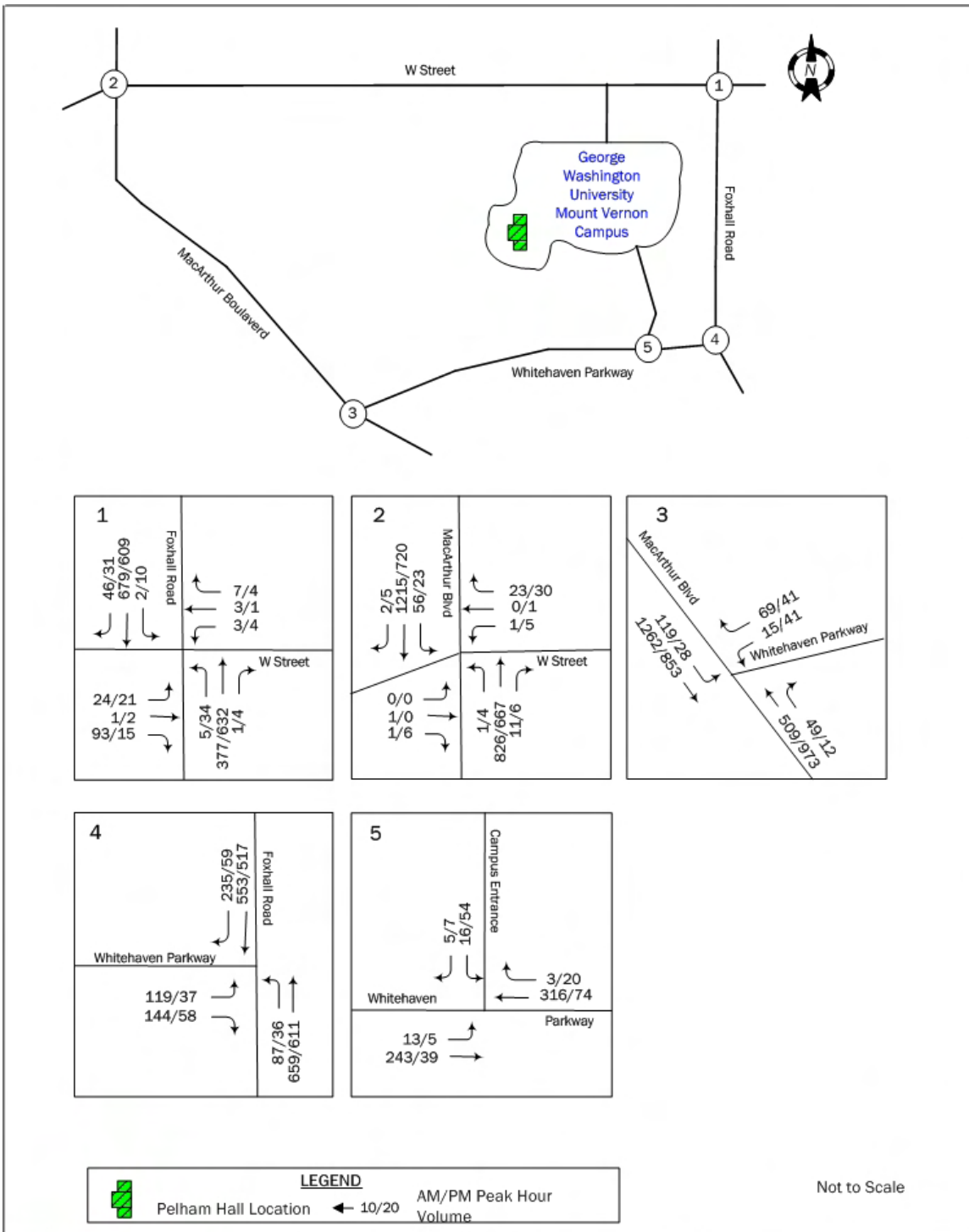


Table 6
Future Background Conditions Level of Service

I.D	INTERSECTION	AM Peak		PM Peak	
		LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
1	Foxhall Road/W Street*	E	41.6	E	35.7
2	W Street/MacArthur Boulevard*	F	63.0	C	15.1
3	Whitehaven Parkway/MacArthur Boulevard*	C	18.4	E	45.6
4	Foxhall Road/Whitehaven Parkway	A	8.1	B	12.4
5	Whitehaven Parkway/Campus Entrance*	C	16.6	A	9.5

* Unsignalized intersection - LOS reflects worst minor approach

As Table 6 indicates, all of the study area intersections that currently operate within acceptable levels during existing conditions will continue to operate at acceptable Levels of Service with the addition of Philips Estates project and regional growth. The W Street/MacArthur Boulevard intersection will continue to operate at a LOS “F” during the AM peak hour with a minimal increase in delay as compared to existing conditions.

Secondary Campus Access

As part of the Pelham Hall Replacement Project, the University is proposing a secondary campus access road (identified in Figures 13 and 14 of the approved Mount Vernon Campus Plan) on Whitehaven Parkway which would be used by construction vehicles during construction and would provide controlled campus access (primarily service and delivery) thereafter. The access road is located west of the current campus main entrance on Whitehaven Parkway and would connect to the existing campus perimeter road which is proposed to be limited to one way traffic southbound between Hand Chapel and Pelham Replacement Project (following Project completion and occupancy). Anticipated users of the one way section of the perimeter road would exit the campus via the proposed access road – including facilities vehicles, security personnel, occasional pick up and drop off of shuttle riders with disabilities, and move-in/move-out operations at specific times of the year.

The proposed additional campus access on Whitehaven Parkway would also function as the entry and exit point for vehicles using the Pelham Replacement Project loading dock. During Project construction, it is GW’s intention that all traffic exiting from the proposed access road would be restricted to making left turns onto Whitehaven Parkway to reduce the conflict with St. Patrick’s School activities.

The existing main entrance on Whitehaven Parkway would continue to function as the primary access to the campus in the future.

Pelham Replacement Project Future Trip Generation

Based on existing traffic data the Mount Vernon Campus currently generates a very low amount of traffic during the peak hours. More than half of the student population resides on the campus and there is high utilization of the Vern Express shuttle bus. Adding approximately 209 residential students to the campus as part of the proposed project will not result in a notable increase in traffic. Students will continue to walk to class and use the free shuttle bus for convenient access to the Foggy Bottom Campus. There is not expected to be any traffic increase associated with the Project during the AM peak hour (7:30 AM to 8:30 AM). During the PM peak hour a 5% increase in traffic was used to account for the small number of residential students that would drive to extracurricular activities off-campus including part-time jobs, internships, etc. The 5% growth rate was calculated assuming that 22%^c of existing traffic is student traffic (vs. faculty/staff traffic) and that the student traffic would increase by 24% due to the 24% resident student population increase anticipated as a result of the Pelham Replacement Project. The growth rate was applied to existing trip generation (see Table 1). Table 7 below summarizes the AM and PM peak hour trips generated by the Pelham Replacement project.

Table 7
Trips Generated by Pelham Replacement Project

	AM Peak		PM Peak	
	IN	OUT	IN	OUT
Pelham Replacement Project	2	7	1	10

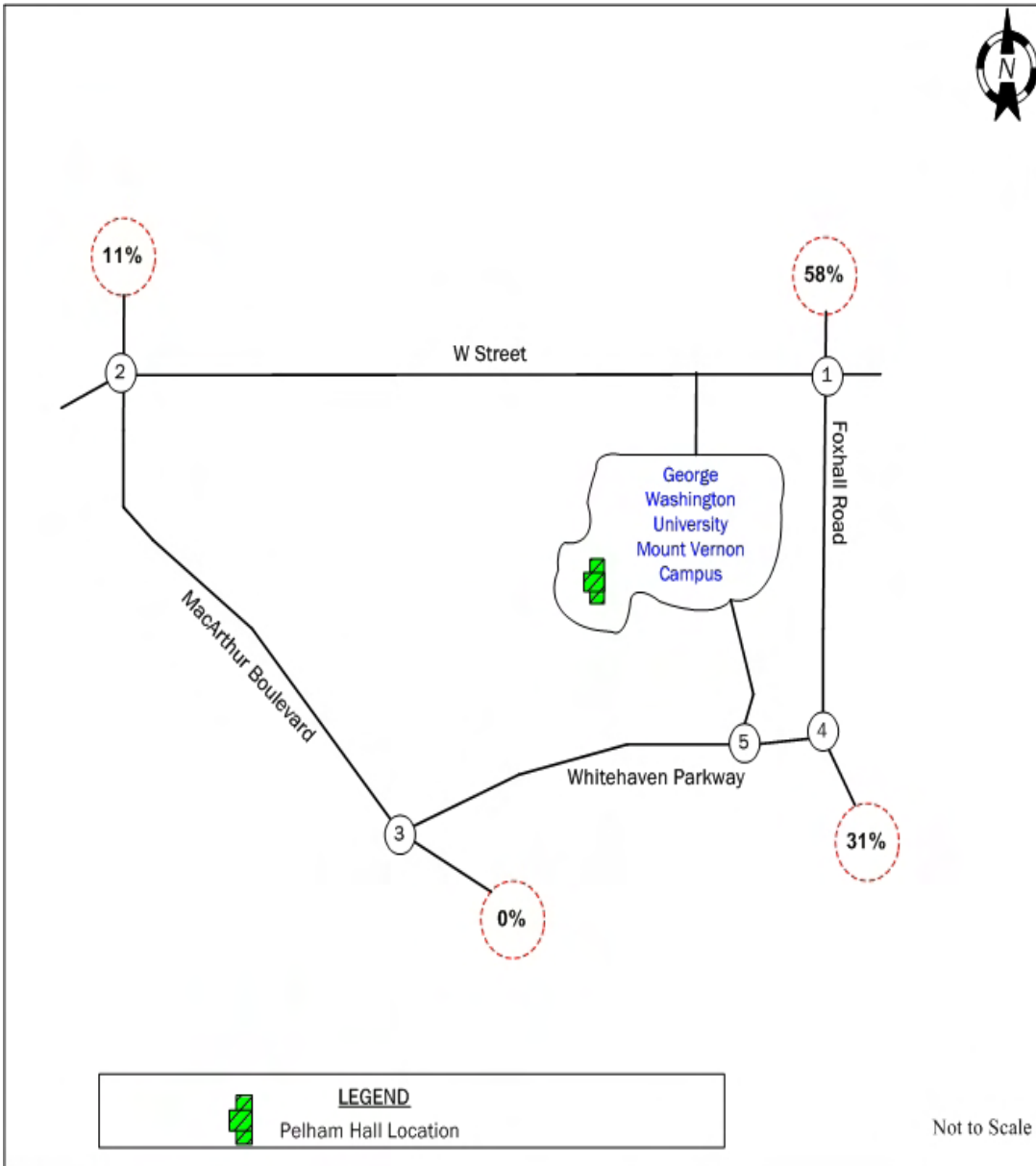
As Table 7 indicates, the Pelham Hall Replacement Project would only generate 9 AM and 11 total PM peak hour trips.

^c 22% of the parking supply is allocated for student usage (see Table 3). Therefore it was assumed that students only generate 22% of the campus trips.

Future Traffic Projections

Traffic projected by the Project was distributed throughout the road network using the directional distribution shown in Figure 6 below. This directional distribution is based on existing traffic patterns in the area.

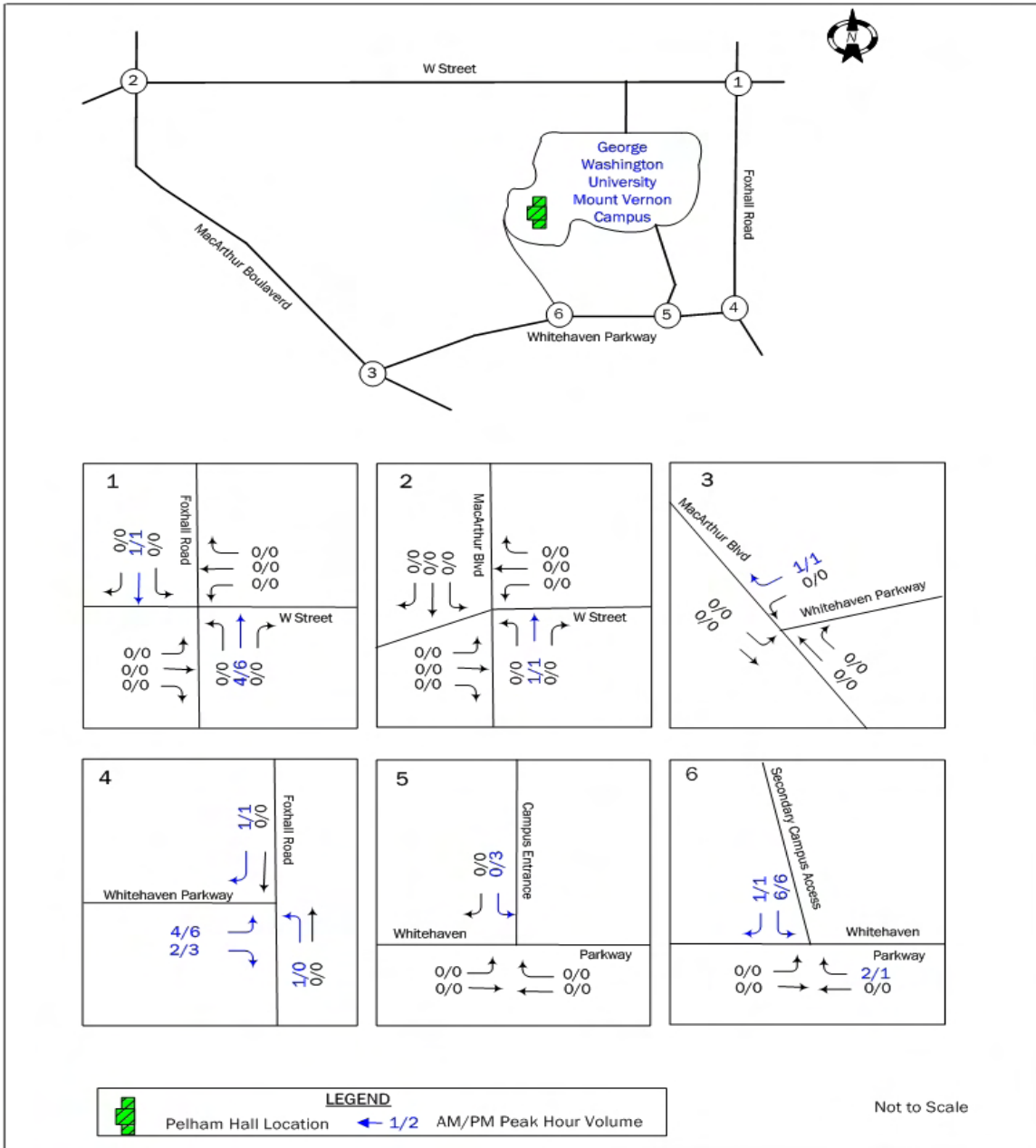
Figure 6
Directional Distribution Percentages



Site Traffic Volumes

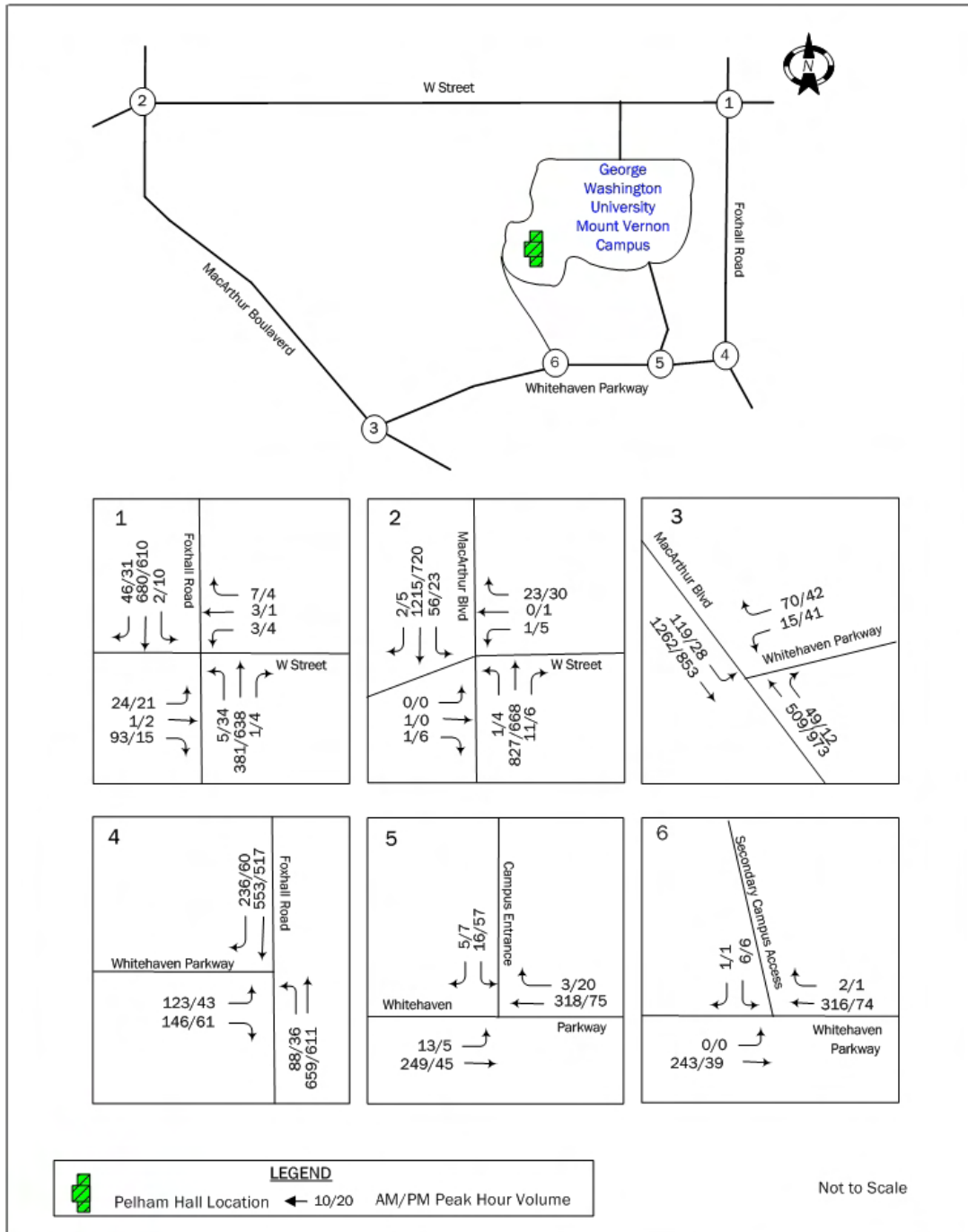
The site generated traffic volumes in Table 7 were assigned to the roadway network according to the directional distribution shown in Figure 6. The resulting Pelham Replacement Project generated traffic volumes are shown in Figure 7.

Figure 7
Site Generated Traffic Volumes



The site traffic assignments on Figure 7 were added to the future background traffic volumes shown on Figure 5 to obtain the total future traffic volumes shown on Figure 8.

Figure 8
Total Future Traffic Volumes



Capacity Analysis

The traffic volumes shown in Figure 8 were analyzed using SYNCHRO 6 Software. The results of the analysis are summarized in Table 8. Analysis worksheets are included in the appendix.

Table 8
Total Future Conditions Level of Service

I.D	INTERSECTION	AM Peak		PM Peak	
		LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
1	Foxhall Road/W Street*	E	42.1	E	36.1
2	W Street/MacArthur Boulevard*	F	63.0	C	15.1
3	Whitehaven Parkway/MacArthur Boulevard*	C	18.4	E	45.6
4	Foxhall Road/Whitehaven Parkway	A	8.6	B	12.5
5	Whitehaven Parkway/Campus Entrance*	C	16.8	A	9.5
6	Whitehaven Parkway/Secondary Access*	C	15.7	A	9.1

* Unsignalized intersection - LOS reflects worst minor approach

As Table 8 indicates, all of the study area intersections that operated within acceptable levels during future background conditions will continue to operate at acceptable Levels of Service with the addition of the Pelham Replacement Project. The W Street/MacArthur Boulevard intersection will continue to operate at a LOS “F” during the AM peak hour, but notably with no increase in delay as compared to background conditions.

Table 9 below shows a comparison of study area intersections during existing, future background and future traffic conditions with the Pelham Hall project.

Table 9
Future Level of Service with Pelham Replacement Project

INTERSECTION	EXISTING CONDITIONS		BACKGROUND CONDITIONS		FUTURE CONDITIONS	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
Foxhall Road/W Street*	D(32.9)	D(30.1)	E(41.6)	E(35.7)	E(42.1)	E(36.1)
W Street/MacArthur Boulevard*	F(55.6)	B(14.8)	F(63.0)	C(15.1)	F(63.0)	C(15.1)
Whitehaven Parkway/MacArthur Boulevard*	C(17.0)	E(39.0)	C(18.4)	E(45.6)	C(18.4)	E(45.6)
Foxhall Road/Whitehaven Parkway	A(7.7)	B(12.1)	A(8.1)	B(12.4)	A(8.6)	B(12.5)
Whitehaven Parkway/Campus Entrance*	C(16.2)	A(9.5)	C(16.6)	A(9.5)	C(16.8)	A(9.5)
Whitehaven Parkway/Secondary Campus Access*	N/A	N/A	N/A	N/A	C(15.7)	A(9.1)

* *Unsignalized intersection - LOS reflects worst minor approach*

Parking

The Pelham Replacement Project would eliminate five existing parking spaces located on the perimeter road, north of the current Pelham building, closest to Berkley Terrace in response to the request of residents of Berkeley Terrace.

Based on a May 2006 parking occupancy survey, 40% of the parking spaces (not including the Lab School) on campus are occupied during the peak hour. With the addition of the 30 reserved Lab School spaces the peak occupancy on campus is 42%.^d Accordingly, there is more than adequate capacity to accommodate the additional approximately 209 residential students planned as part of the project. (Note: A small number of resident students bring cars to campus. In fact, of the 496 existing resident students, only 14 currently have parking permits).

Loading

The proposed delivery facility at the Pelham Replacement Project will allow for centralized loading and deliveries with more efficient operations. The new dining facility is expected to generate one or two more deliveries per week. Delivery vehicles will utilize the new campus access on Whitehaven Parkway to enter and exit the loading dock.

^d As set forth above, the Lab School agreement can be terminated by GW in the event it is necessary to address increased parking demand.

CONCLUSIONS

The primary conclusions that were presented in this study are as follows:

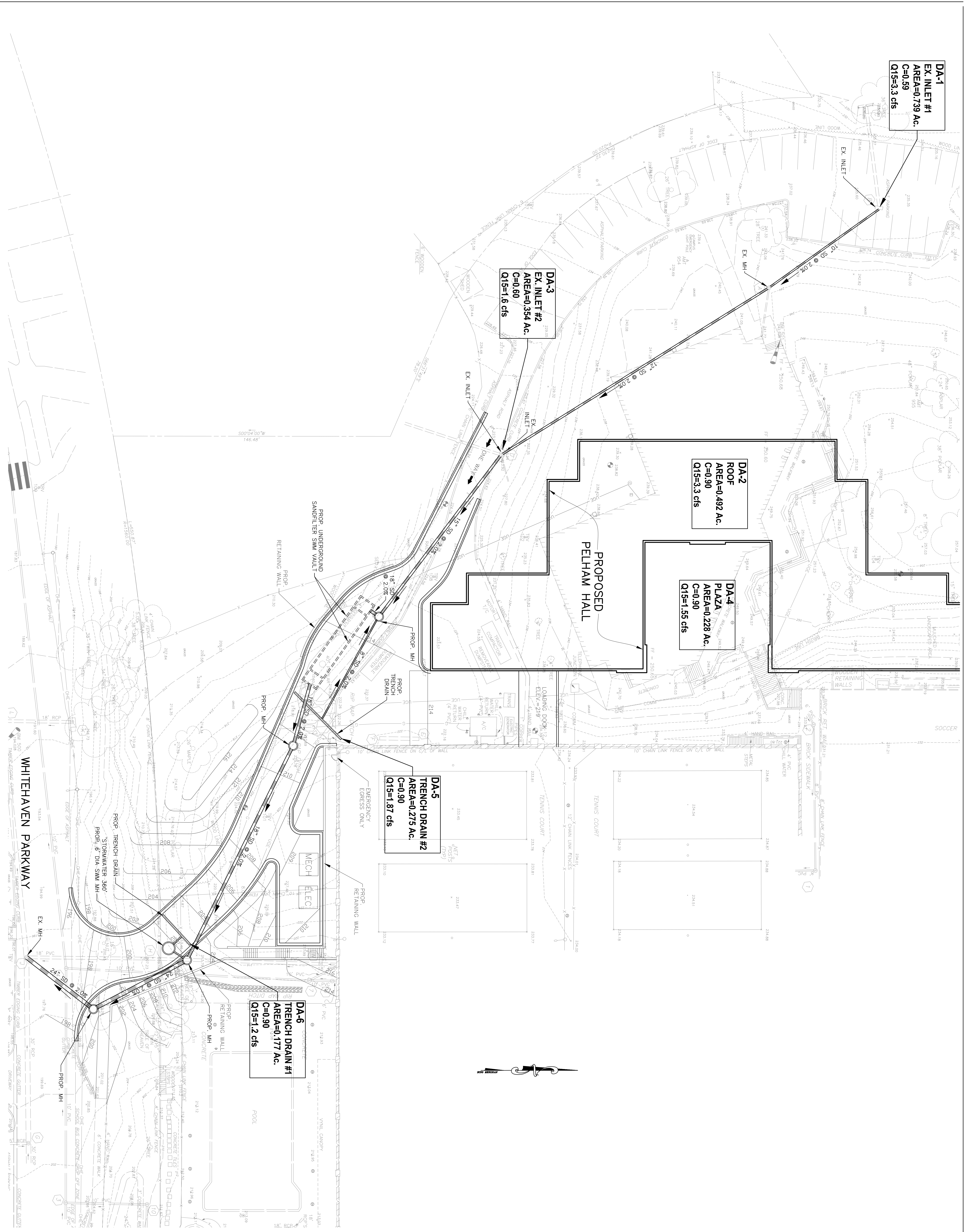
- Four out of the five intersections operate at acceptable Levels of Service under existing conditions during both the AM and PM peak hours. The W Street/MacArthur Boulevard intersection operates at an acceptable LOS during the PM peak hour and a LOS “F” during the AM peak hour. (NOTE: An additional analysis was performed at the W Street/ MacArthur Boulevard intersection for the AM peak hour using volumes that travel through the intersection less existing traffic that is associated with the Mount Vernon Campus. The analysis indicated that the intersection would operate at a LOS “F” even without MVC related traffic.)
- All of the study area intersections that operated within acceptable levels during existing conditions will continue to operate at acceptable Levels of Service with the addition of the Philips Estates and regional background growth. The W Street/MacArthur Boulevard intersection will continue to operate at a LOS “F” during the AM peak hour with a minimal increase in delay as compared to existing conditions.
- All of the study area intersections that operated within acceptable levels during background conditions will continue to operate at acceptable Levels of Service with the addition of the Pelham Replacement Project. The W Street/MacArthur Boulevard intersection will continue to operate at a LOS “F” during the AM peak hour, but notably with no increase in delay as compared to background conditions. The Pelham Hall project will have no adverse impact on the study area intersections.
- The 250 parking spaces available on the Mount Vernon Campus will provide adequate parking to meet the projected peak hour parking demand after completion and occupancy of the Pelham Replacement Project.

EXHIBIT J
SECONDARY WHITEHAVEN ACCESS POINT
TRAFFIC CONTROL PLAN

The University does not anticipate that it will need to close any portion of Whitehaven Parkway, NW during its construction of the proposed Secondary Whitehaven Access Point. In addition, the proposed construction activity will not affect or obstruct the existing sidewalk on the north side of Whitehaven Parkway, which terminates approximately 40 feet to the east of the construction site.¹ In order to accommodate the existing uses along Whitehaven Parkway, the University intends to commit to the following procedures:

1. During the construction of the Secondary Whitehaven Access Road, GW shall manage the timing of construction vehicles and deploy appropriate personnel so as to minimize disruption to St Patrick's School carpool operations on Whitehaven Parkway.
2. Following the completion of the Access Road, truck queuing will be conducted within the perimeters of the Mount Vernon campus only.
3. Construction vehicles will be required to approach and exit the Pelham Replacement Project site from the east, using either the existing or secondary Whitehaven access roads, unless otherwise required by DDOT, in which event the University agrees to explore and discuss other alternatives with DDOT and interested members of the community.
4. Prior to the initiation of construction, GW shall adopt a Construction Management Plan in consultation with the construction contractor to be selected. There will be limited parking on the construction site and therefore the Construction Management Plan shall require the general contractor to develop a plan with the subcontractors for transporting additional workers to and from the site. Furthermore, construction workers shall be advised that they are not to park on neighborhood streets in the vicinity of the Mount Vernon Campus, including but not limited to Whitehaven Parkway, W Street, Berkley Terrace and 48th Streets, NW.
5. Appropriate signage will be placed at the terminus of the existing sidewalk to alert pedestrians of the construction zone ahead.

¹ Indeed, the construction project will result in the extension of the existing sidewalk up to the Secondary Whitehaven Access Point.



- NOTE:
1. LOCATION OF ROOF DRAINS AND PLAZA DRAINS ARE NOT YET DESIGNED.
 2. STORM DRAIN PIPING IS NOT SHOWN FOR ROOF AND PLAZA DRAIN CONNECTIONS.
 3. STORM DRAIN PIPE SIZES SHOWN INCORPORATE THE CONTRIBUTING DRAINAGE AREAS FROM BOTH THE ROOF AND PLAZA AREAS.
 4. DUE TO THE PRESENCE OF SEPARATE STORM AND SANITARY SEWERS WITHIN THE WHITEHAVEN PARKWAY PUBLIC SPACE ONLY QUALITY TREATMENT IS REQUIRED FOR ALL IMPERVIOUS AREAS.
 5. STORM DRAIN SYSTEM IS SIZED BASED UPON A 15-YR STORM EVENT.
 6. SEE LANDSCAPE DRAWINGS FOR SITE IMPROVEMENTS PLAN.

Bedham, Yulek, Pascoe Architects & Engineers, P.C.
1000 Potomac Street, NW
Washington, D.C. 20007
Tel: 202.471.5900
Fax: 202.471.5909
eyep.com

EYP/

CONSULTANTS:

AMT

A. Morton Thomas and Associates, Inc.
Consulting Engineers
10 C STREET N.E., SUITE 430, WASHINGTON, DC 20002
(202) 299-4545 FAX (202) 299-5051
EMAIL: AMTI@AMTENGINEERING.COM

KEY PLAN:

NO.	REVISION/SUBMISSION	DATE

GEORGE WASHINGTON UNIVERSITY
Pelham Replacement Project
Washington, DC

DATE: 05-18-2007
SCALE: 1"=20'
EYP PROJECT NO. 2005013.02
DESIGNED BY: BCI
DRAWN BY: BCI
CHECKED BY:

CONCEPT
STORMWATER
MANAGEMENT PLAN

C4.0



symmetra design

Nicole A. White, P.E., PTOE
PRINCIPAL

Ms. White leads the organization's strategic direction with over 10 years of experience in transportation planning and traffic engineering projects. Prior to starting Symmetra Design, Ms. White held a senior position with a leading consulting firm in Washington, DC and supported a multitude of clients. She brings extensive management skills and expertise ranging from intersection safety and operational studies to parking studies and Transportation Management Plans. Ms. White specializes in master planning for Federal Campuses and Universities, as well as revitalization and redevelopment studies for corridors and small areas. Ms. White has significant experience coordinating with community groups and local officials. She is a certified Charrette Planner through the National Charrette Institute.

PROFESSIONAL REGISTRATIONS

Maryland – Professional Engineer
Institute of Transportation Engineers – Professional Traffic Operations Engineer

EDUCATION

Master of Engineering,
Civil Engineering - Transportation
University of Maryland, 2002

Bachelor of Science,
Civil Engineering
University of Maryland, 1996

PROFESSIONAL AFFILIATIONS

Institute of Transportation Engineers
Urban Land Institute
American Planning Association
African American Real Estate Professionals

TECHNICAL PAPERS & PRESENTATIONS

Comparative Analysis of Transportation Impacts of Three Major Urban Universities

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Transportation Planning, Traffic Engineering.



RELEVANT EXPERIENCE

Master Plans & Transportation Management

Ms. White has managed the transportation component of Master Plan and Environmental Impact Statement studies for a number of Universities and Federal Campuses. Her work on these studies includes projecting and analyzing future transportation and parking conditions based on population and development growth, and recommending necessary improvements to transportation and parking systems. Ms. White is experienced in developing Transportation Management Plans with travel demand objectives, goals, strategies, and measures of effectiveness. Ms. White also has significant experience presenting to community groups, planning agencies, and zoning boards as part of the Master Planning and EIS processes. Project experience includes:

- St. Elizabeth's West Campus, Washington, DC
- Suitland Federal Center Campus, Suitland, MD
- The George Washington University Campus Plan 2000, Washington, DC
- American University Campus Master Plan, Washington, DC
- Campus Plan 2000, Georgetown University in Washington, DC

Redevelopment & Revitalization Studies

Ms. White has directed a number of redevelopment and revitalization studies where she has gained significant experience developing transportation concepts by working with consultant planning teams, local agencies, and community groups. Her experience includes balancing the competing needs of various modes of transportation, including transit and pedestrian facilities. Project experience includes:

- H Street, N.E. Redevelopment Project, Washington, DC
- Port Towns Peace Cross Revitalization, Bladensburg, MD
- Georgia Avenue Revitalization, Washington, DC
- David Taylor Research Center Redevelopment, Annapolis, MD

Parking Studies

Ms. White has developed parking solutions for major downtown areas including mixed-use developments and entertainment destinations. Ms. White's previous project experience includes analysis of metered and residential on-street parking restrictions. Ms. White is experienced at developing parking management plans that include maximizing the use of shared-parking facilities and remote parking locations. Ms. White is experienced at addressing parking needs for daily use and special events. Project experience includes:

- Shaw Parking Initiative
- Downtown Charlotte Parking Study
- Georgetown Parking Study
- U.S. Census Bureau
- The George Washington University

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Transportation Planning, Traffic Engineering.

**Outline of Testimony of
Representative of The George Washington University
Alicia M. O’Neil, Director, Real Estate Operations, Office of Real Estate**

- I. Introduction
 - A. Representative of GW
 - B. Overview of the Mount Vernon Campus Plan and Relationship to University-wide Objectives
- II. The Proposed Project
 - A. Need for Student Housing
 - B. Requirements of Campus Plan and Request for Amendment to Campus Plan
 - B. Suitability of this Site for Campus Housing and Support Space
 - C. Programming
- III. Community Outreach Efforts
 - A. Quarterly Meetings
 - B. Berkeley Terrace Neighbors Agreement
 - C. W Street Neighbors Discussions
 - D. St. Patrick’s School Agreement
 - E. Construction Management Plan
- IV. Conclusion – No Objectionable Impact

**Outline of Testimony of
Architectural Expert
Steve Kleinrock, Principal, Einhorn Yaffee Prescott Architectural &
Engineering P.C.**

- I. Introduction
 - A. Representative of the Architect
 - B. Experience
- II. Site Location and Description
 - A. Description of the Property
 - B. Description of the Surrounding Neighborhood
 - C. Current Zoning
- III. Existing Conditions
- IV. Project Design
 - A. Plans for the Project
 - B. Relationship to the Campus as a Whole
 - C. Development Parameters Under Campus Plan
 - D. Landscape Plan
 - E. Sustainable Development Elements
- V. Compliance with Requirements of Section 210 of the Zoning Regulations
- VI. Conclusion

**Outline of Testimony of
Facilities Representative for The George Washington University
Arthur Bean, Director, Project Management**

- I. Introduction
 - A. Representative of GW
 - B. Experience
- II. Overview of Comprehensive Stormwater Management Plan for the Mount Vernon Campus
- III. Stormwater Management Improvements Associated with Project
- IV. Conclusion – No Objectionable Impact

**Outline of Testimony of
Traffic Expert
Nicole A. White, P.E., Principal, Symmetra Design**

- I. Introduction
 - A. Experience
 - B. Study Scope and Objectives
- II. Area Transportation System
 - A. Relationship to Campus Plan
 - B. Consideration of Proposed Future Projects
- III. Existing Conditions
- IV. Description of Project
- V. Traffic Impact Analysis
- VI. Conclusion – No Objectionable Impact

Title:

Creative Design Director
Principal

Education:

B.F.A./1974/ Architecture/
University of New Mexico

M.Arch./ 1982/ Architecture/ University
of New Mexico

Active Registration:

Registered Architect / DC, MD, VA

Design Awards:

2005 Merit Award
AIA Washington, DC
Katzen Arts Center, American University

2005 Grand Honor Award
AIA Potomac Valley
Katzen Arts Center, American University

2004 Merit Award
AIA Washington, DC
Jesuit Community Residence, Georgetown
University

2004 Merit Award
AIA West Virginia
Harless Dining Hall, Marshall University

2003 Award of Excellence
AIA, Washington, DC
Greenberg Theater, American University

1995 Louis I. Kahn Citation
American School and University Magazine
in conjunction with the AIA
Columbus School of Law, Catholic
University of America

Einhorn Yaffee Prescott
Architecture & Engineering P.C.

With nearly 30 years of architectural design experience, Mr. Kleinrock has played active roles in an array of projects. Serving as design principal for many of his previous projects, Mr. Kleinrock has focused his career on the design and renovation of college and university facilities. A list of his relevant project experience includes the following.

Pelham II Live/Learn Community, George Washington University, Washington, DC

Design Principal for a new 500-bed residence hall featuring a combination of two-bedroom suites and apartments. Support spaces include study lounges, community rooms, vending rooms, laundry, and storage.

Townhouse Row, George Washington University, Washington, DC

Design Principal for eight townhouses totaling 68,500 s.f. Spaces for the 200 students include social and study spaces, kitchens, living and dining rooms, and a private courtyard.

Katzen Arts Center, American University, Washington, DC

Design Principal for the programming, planning and design of a new 130,000 s.f. cultural arts center. The building includes spaces for studio arts, a recital hall, music practice rooms, a dance studio, black box theatre, an art history auditorium, instructional classrooms, and a major art gallery for permanent and visiting collections.

Fine and Performing Arts Building, Bowie State University, Bowie, MD

Design Principal for the 123,500 s.f. facility which will include a 160-seat Recital Hall; a 400-seat theater with stage, orchestra pit, and trap room; a 100-200 flexible seat Black Box Theater; and 80-seat Dance Theatre; dressing rooms, shops, and merchandising facilities; an Art Gallery; and lounge facilities.

New Art and Interactive Multimedia Building, The College of New Jersey, Ewing, NJ

Design Principal of a new 72,500 g.s.f. art and interactive multimedia building. The program includes studios for sculpture, printmaking, painting, drawing, jewelry-making, papermaking, graphics, photography, computer rooms, and production areas for interactive multi-media, offices and classrooms.

Washington, DC Center, University of California, Washington, DC

Design Principal for the planning and design of a new multi-purpose, live-learn facility for the university's Washington, DC semester program. The 11-story structure provides apartment-style living quarters for up to 280 students and 10 faculty members including classrooms, faculty and administrative offices, and an auditorium with teleconferencing capabilities.

New Jesuit Community Residence, Georgetown University, Washington, DC

Design Principal of a new campus residence to house 45 Jesuits. The project included dining areas, administrative offices, chapels, and recreational facilities.

New Student Academic Center and Student Union Renovation, Gallaudet University, Washington, DC

Design Principal for a new 60,000 s.f. high-tech academic center and renovation to an existing 48,000 s.f. student union. The center houses state-of-the-art classrooms for undergraduates and graduate students, a multimedia center, student lounges, offices, multimedia theater, post office, and bookstore.

Student Services Building, Montgomery College, Takoma Park, MD

Design Principal for the design of a 96,000 s.f. student services building. The new facility includes a 400-seat dining facility, computer labs, a career and educational planning center, copy center, bookstore, and student activities areas. In addition, it houses the Dean of Students, financial aid and admissions departments, and campus security.