WELLS & ASSOCIATES, LLC
TRAFFIC, TRANSPORTATION, and PARKING CONSULTANTS

MEMORANDUM

TO: Josh Dix
P.N. Hoffman

CC: Carolyn Brown
Holland & Knight, LLP

FROM: Michael J. Workosky
Melissa T. Hish
Wells & Associates, LLC

DATE: December 15, 2003

SUBJECT: Transportation Analysis Addendum for Square 235; Northwest Washington, D.C.

Introduction

This memorandum presents a transportation analysis addendum for Square 235 located in Northwest Washington, D.C. The site is situated on the northeast corner of 14th and V Streets, between 13th and 14th Streets, as shown on Figure 1.

The original traffic study has been updated to reflect a modification to the access scheme that includes the use of the public alley on the east side of the site. The original report was prepared in June 2003, and should be referenced for additional background information.

P.N. Hoffman proposes to develop the property with approximately 280 condominium units that will be privately owned, with 24,000 S.F. of ground-level retail space. Approximately 200 parking spaces will be provided in a below-grade structure on the western portion of the property and 50 spaces within the eastern section of the site. This density and program is consistent with the original traffic report.

Access is proposed from the existing public alleys that traverse the site on both the east and west sides. The southern portion of the west alley will be widened from 12-feet to 20-feet to facilitate two-way vehicular traffic. Vehicle traffic will be

ZONING COMMISSION
District of Columbia
CASE NO.03-26
EXHIBIT NO.24.2

discouraged from using the northern section of the west alley to access W Street by installing special pavement treatments, if approved by DDOT.

The east alley is generally 12-feet in width, and will primarily serve the approximately 30 dwelling units within the north warehouse (east) portion of the site. The main entrance to the residential building will be located on 14th. Pedestrian access to the retail space will be provided from 14th Street. A copy of the site plan is shown on Figure 2.

The project developers are requesting a waiver be granted that would eliminate the need to provide a 55-foot loading dock to serve the site, as identified in the original traffic study. Two (2) 30-foot loading bays are proposed. Additionally, a 20-foot service space and two (2) 100 square foot loading platforms will be provided.

This report analyzes existing traffic conditions and forecasted traffic conditions in 2007, and is intended to address the Environmental Impact Screening Form (EISF). A copy of the completed form is contained in Appendix A.

For ease of reading, all of the revised figures are attached to this document.

Analysis

Existing Traffic Volumes. Supplemental existing traffic and pedestrian counts were collected at the east alley intersections with both W and V streets. These counts were collected Thursday, October 16, 2003 during the during the AM and PM peak periods, between 6:00 AM and 9:00 AM, and 4:00 PM and 7:00 PM. Existing traffic volumes and lane use are illustrated on Figures 3 and 4, respectively. Traffic count summaries are contained in Appendix B.

Existing Capacity Analysis. Existing intersection levels of service (LOS) were calculated based on the existing traffic counts to include the east alley intersections with W and V streets shown on Figure 3, existing lane use shown on Figure 4, the existing traffic signal timings and phasing recorded during

peak periods, and the methodology presented in the 2000 Highway Capacity Manual, (HCS Version 4.1d) published by the Transportation Research Board. The results are presented in Table 1. Capacity analysis worksheets are contained in Appendix C.

Table 1 indicates the following:

1. The W Street intersections with 14th and 13th Streets operate at an acceptable level of service (LOS "B" or "C") during both the AM and PM peak hours.

2. The V Street intersections with 14th and 13th Streets operate at acceptable levels of service (LOS "B") during both the AM and PM peak hours.

3. All of the turning movements to and from both the east and west alleys on W and V Streets operate at acceptable levels of service during both AM and PM peak hours.

Background Traffic Forecasts. Background traffic forecasts (without the development of Square 235 property) were prepared based on the existing traffic volumes and the background development assumptions used in the original traffic study. The trip generation characteristics of the background development are contained in Table 2. The other development traffic volumes are shown on Figure 5. The resulting background traffic forecasts to include the east alley intersections are shown on Figure 6.

Background Levels of Service. Capacity analyses were conducted for background conditions to include the east alley intersections with W and V streets. The results are summarized in Table 1. Capacity analysis worksheets for background conditions are contained in Appendix D.

Table 1 indicates that the overall levels of service will remain similar to those currently realized under existing conditions. The majority of intersections will continue to operate at LOS "B" or "C" during both the AM and PM peak hours. The 14th Street/W Street intersection is forecasted to operate at LOS "D" during the AM peak hour.

Proposed Site Access. Access to the Square 235 property is proposed from the existing public alleys on both the east and west sides of the property. The southern portion of the west alley will be widened to a standard 20-feet from V Street to the north property line. A portion of the existing 12-foot wide section of the west alley will remain with access to W Street. Vehicles to and from the north on W Street will be discouraged from using the 12-foot wide portion of the alley by installing special pavement treatments, if approved by DDOT.

The existing 12-foot wide east alley is proposed to provide access primarily to the north warehouse portion of the site that contains approximately 30 of the 280 total dwelling units. Access to parking within the north warehouse area is proposed via a one-way westbound drive aisle serving approximately 20 angled parking spaces. The southern portion of the warehouse area would be served via a two-way drive aisle with traffic encouraged to enter and exit via the widened 20-foot west alley. The east alley is proposed to remain at its current 12-foot width, since adjacent property is not available.

Site Trip Generation. The Square 235 property is planned to be developed with approximately 280 condominium units and 24,000 S.F. of ground-floor retail space. The number of AM and PM peak hour trips that will be generated by the site were calculated using standard Institute of Transportation Engineers rates (land use codes 230 and 820) with a 50 percent reduction in residential trips and a 35 percent reduction in retail trips for transit use as utilized in previous studies. As mentioned previously, the retail uses are expected to be community based, and would generally serve the surrounding community. Thus, this analysis is conservative since a significant portion of retail patrons are likely to be walking or transit-based trips.

The results are summarized in Table 3, and indicate that the subject site will generate 111 AM peak hour trips (45 in and 66 out), 232 PM peak hour trips (125 in and 107 out), and 2,551 average daily (24-hour) trips.

Parking Requirement. Based on the District of Columbia code, a total 179 off-street parking spaces are required. The developers propose to provide approximately 250 spaces, exceeding code requirements.

A total of 200 dedicated spaces will be provided for residential use with 50 spaces designated for retail use. In addition, approximately two to four spaces will be designated for ZipCar use. (Refer to Appendix E for additional information.)

Site-Generated Traffic Assignments. The traffic expected to be generated by the residents and retail patrons of the Square 235 property were assigned to the road network based on the original traffic study assumptions and the revised access scheme that includes use of the east alley.

The majority of residents and all retail patrons were assumed to use the parking garage entrance on the west alley from V Street. The remaining residents within the north warehouse portion of the site were assumed to use the east alley for entering the garage, and the widened 20-foot west alley for exiting the garage.

The assumed travel patterns for patrons and residents of Square 235 are contained in Appendix F. The AM and PM peak hour traffic assignments for the project are illustrated on Figure 7, and reflect the transit mode share for residents and retail patrons.

Total Future Traffic Forecasts. Revised total future traffic forecasts were prepared assuming full buildout and occupancy of Square 235 based on the background traffic volumes and the traffic generated by the project under the newly proposed access scheme. These forecasts are conservative and include the traffic currently being generated by the existing uses. The resultant traffic was added to the background development volumes shown on Figure 5 and the site-generated traffic shown on Figure 7 to yield the total future forecasts shown on Figure 8.

Total Future Levels of Service. Capacity analyses were conducted for total future conditions based on the existing lane use shown on Figure 4, the total future traffic forecasts shown on Figure 8, and the revised access scheme for the project. The results are summarized in Table 1. Capacity analysis worksheets for total future conditions are contained in Appendix G.

The results of the revised capacity analyses indicate that the

overall levels of service will remain similar to those forecasted under background conditions without the site development. All of the intersections, including the east alley intersections on W and V streets, would continue to operate at acceptable levels of service during both the AM and PM peak hours. As concluded in the original traffic impact study, the traffic generated by the Square 235 property would not significantly impact overall levels of service at the intersections surrounding the site.

Request for Waiver. The District of Columbia Code requires a 55-foot loading berth and a 200 S.F. loading platform be provided for residential development projects in excess of 50 units. As outlined in the original traffic study, the Square 235 developer requests a waiver be granted to provide two (2) 30-foot berths and two (2) 100 S.F. loading platforms to serve the project. The 30-foot loading berths would be shared by both the retail and residential uses. The 55-foot loading bay would be omitted.

Please note that there is no retail requirement since the residential use is more than 90% of the total building area. Therefore, only the residential requirements are relevant (see zoning code 2201.2).

Justification for this waiver request was provided in the original traffic report, and included a discussion of typical residential and retail loading characteristics based on surveys of existing properties within the immediate site area.

The conclusion of the analysis indicated that residential use of the 30-foot loading docks is minimal, and sharing these with retail users should not conflict with retail loading activities. Since the site configuration would allow for the development of four to five individual stores, a 15-minute loading zone on 14th Street in the vicinity of the retail shops is recommended and could be restricted to off-peak hours. Residents of Square 235 should be required to schedule moves in order to minimize any potential conflicts.

Based on the results of these studies, the request for loading waiver should be granted.

Conclusions

The conclusions of this traffic analysis addendum are as follows:

1. The results of the revised traffic analyses are consistent with those reported in the original traffic study. The traffic generated by Square 235 would have only a minimal effect on the overall intersection delays within the study area.

2. Both of the east alley intersections would continue to operate at acceptable levels of service with the site development. Although the east alley is proposed to remain at its current 12-foot width, it is expected to carry only a minor portion of site-generated traffic, with minimal impact.

3. Approximately 250 parking spaces (200 spaces for residents and 50 spaces for retail users) will be provided to serve residents and retail patrons of Square 235. This exceeds the City parking requirement. In addition, two to four of these spaces will be designated for ZipCar use.

4. Based on information previously provided, the request for a waiver to eliminate the 55-foot loading berth should be granted based on the infrequent use of this facility by residents. It is recommended that moving activities be scheduled to minimize potential conflicts.

\MXW\2099 SQUARE 235\SQUARE 235 TRAFFIC ANALYSIS ADDENDUM

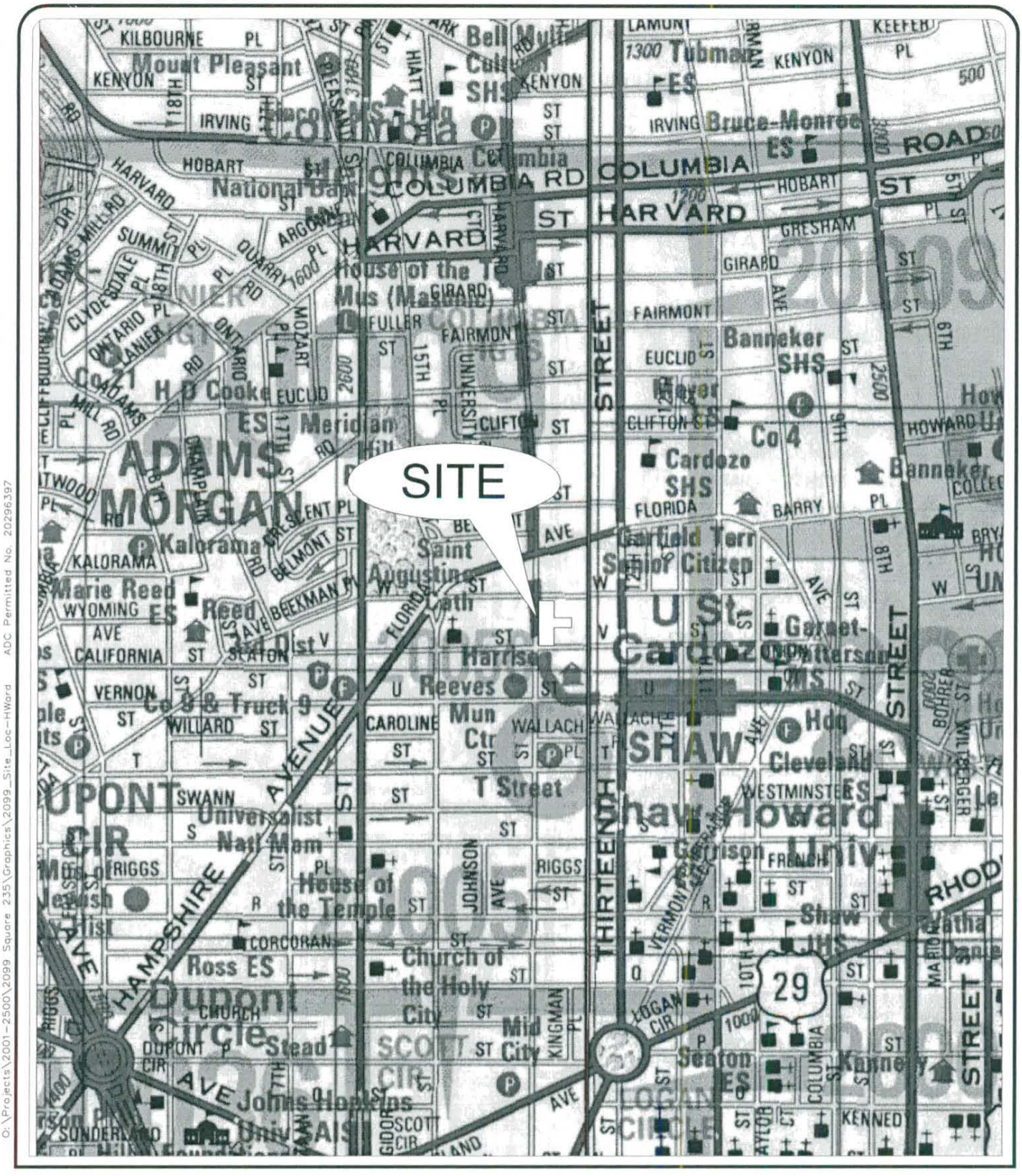


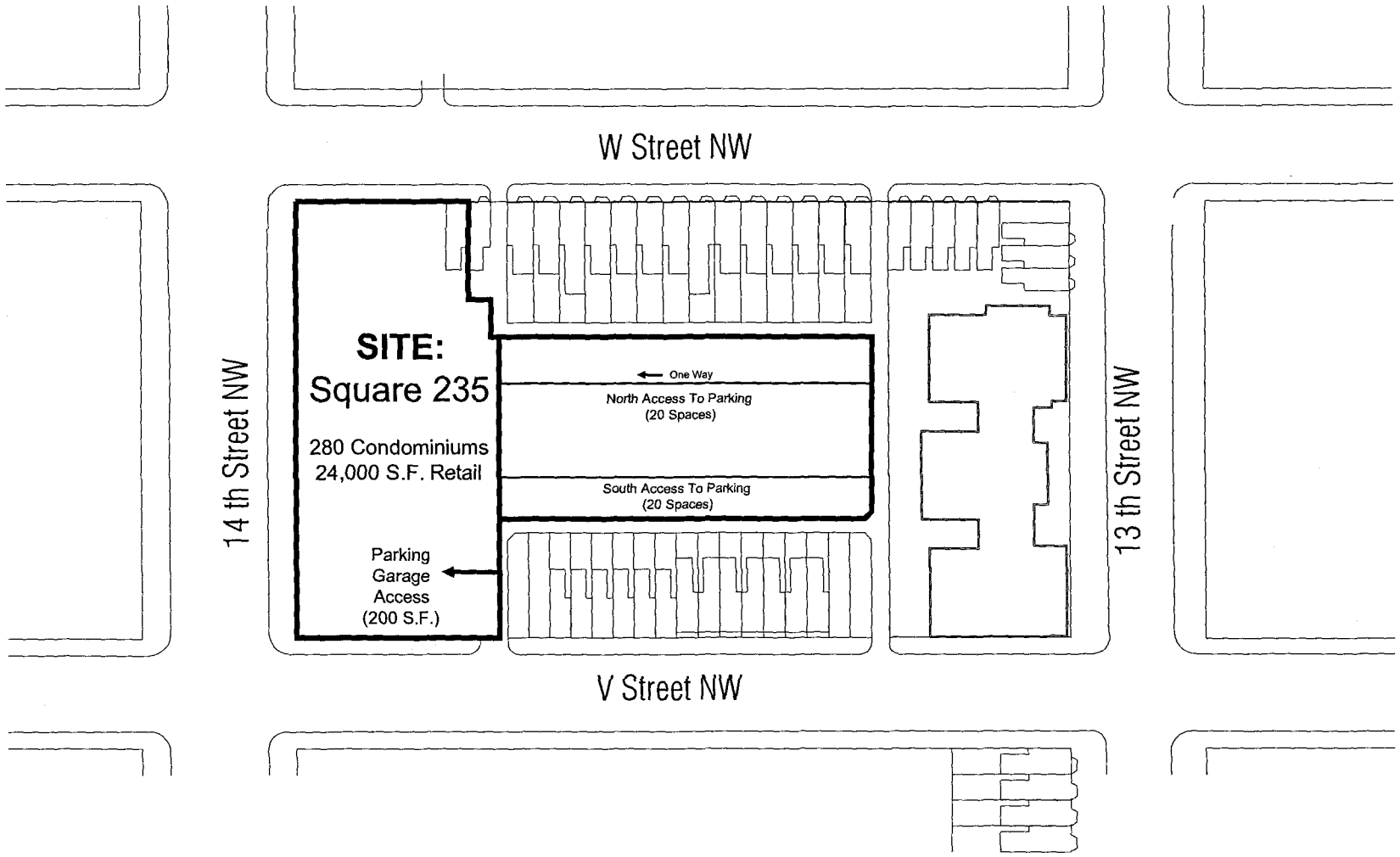
Figure 1
Site Location

North
Schematic

Square 235
North West Washington, D.C.

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Figure 2
Site Plan
(Provided by SK & I Architectural Design Group)

North
Schematic

Square 235
Washington, DC

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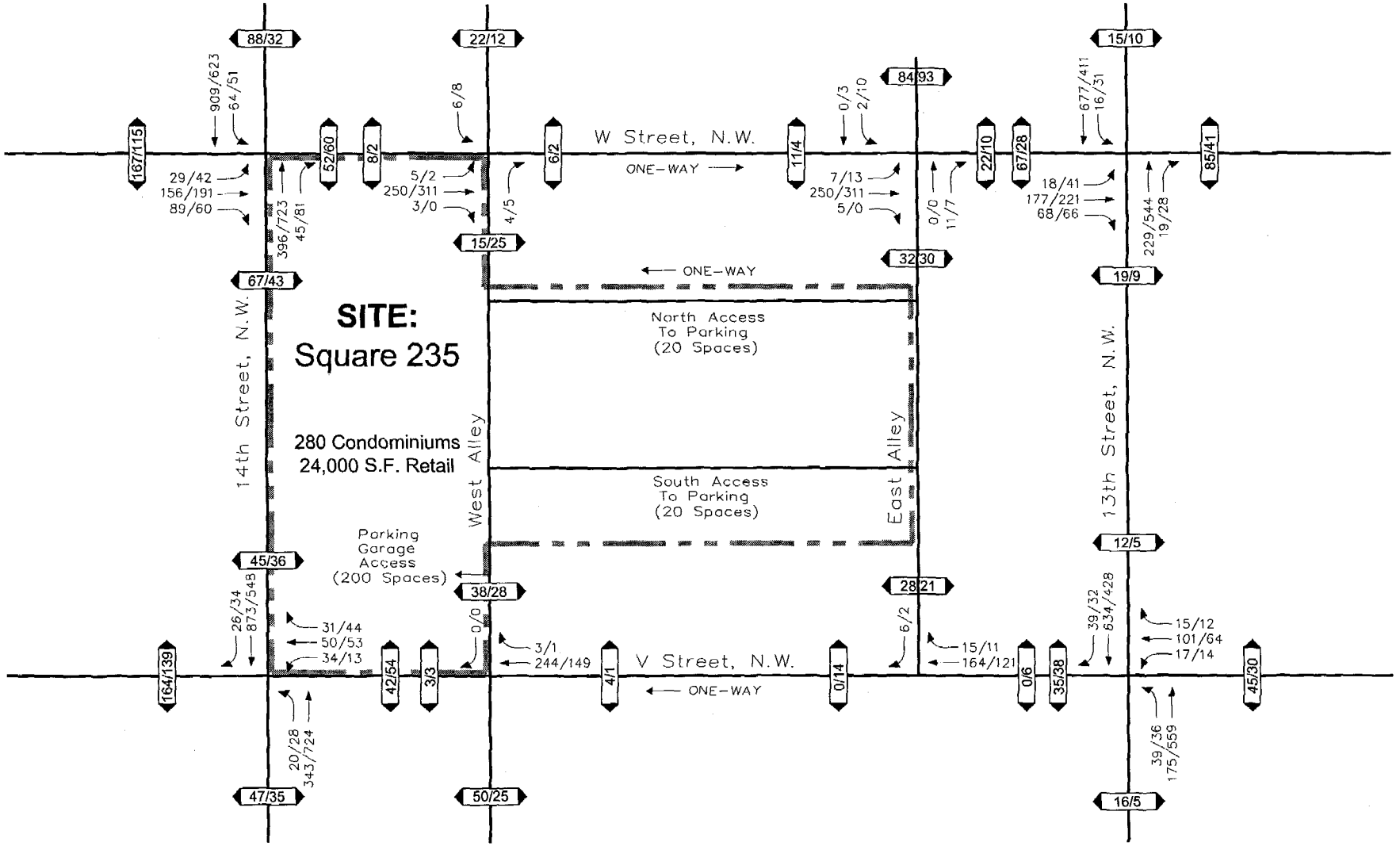


Figure 3
Existing Traffic Counts

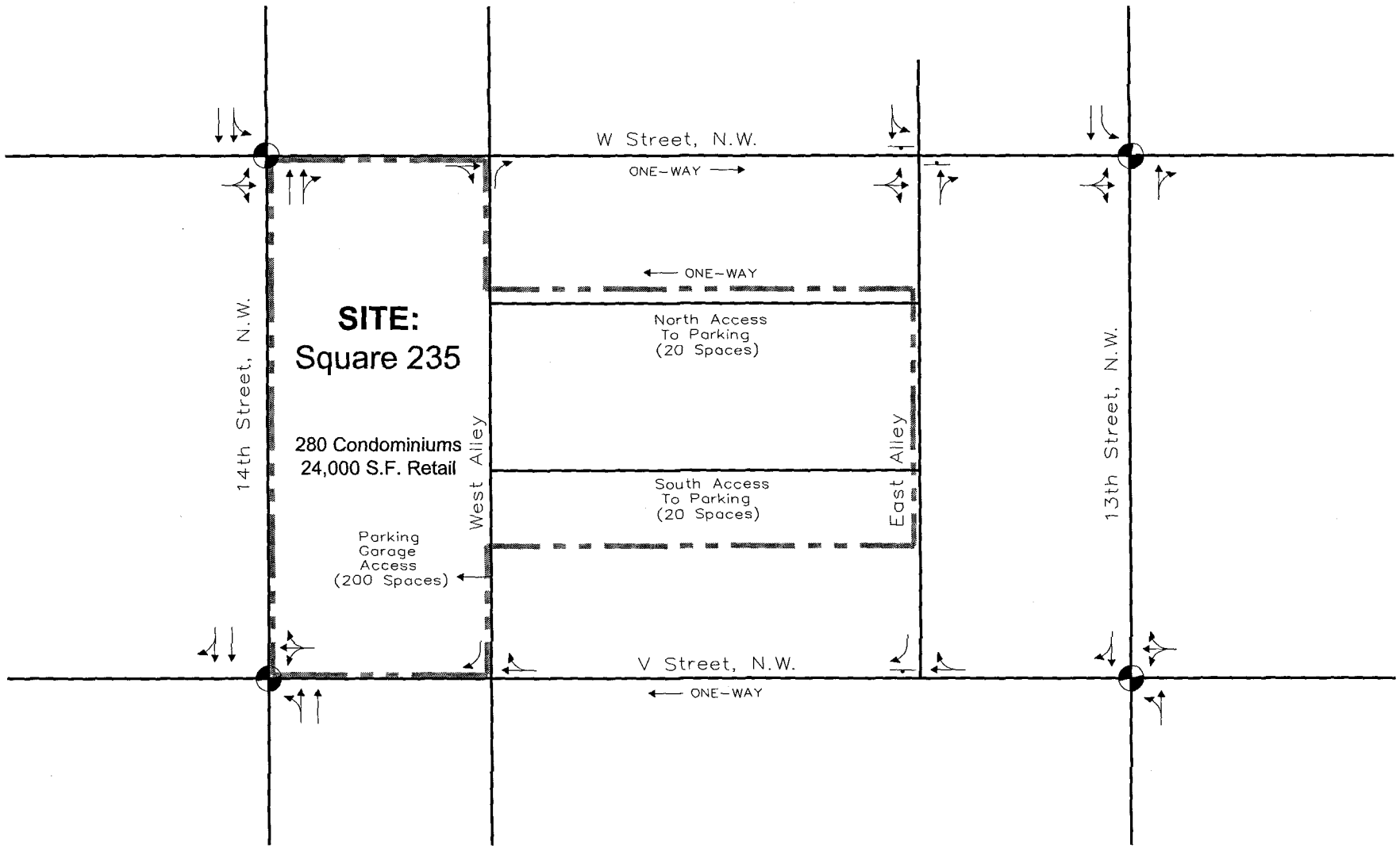
AM. PEAK HOUR / PM. PEAK HOUR
XX/XX
Pedestrian Volumes
AM. PEAK HOUR / PM. PEAK HOUR
000/000

North
Schematic

Square 235
Washington, DC

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Figure 4
Existing Lane Use and
Traffic Control

Represents One Travel Lane
Signalized Intersection
Stop Sign

North
Schematic

Square 235
Washington, DC

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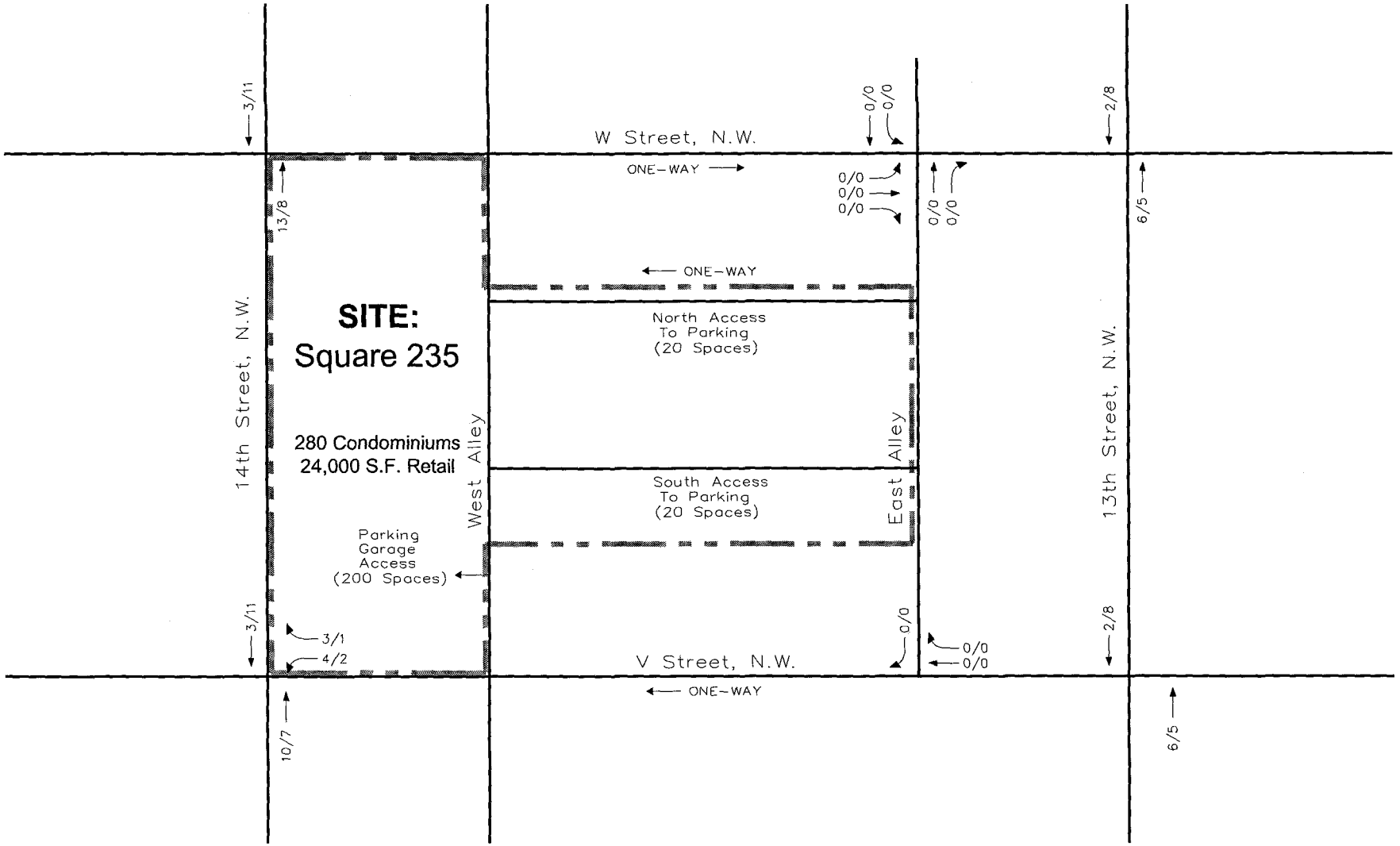


Figure 5
Traffic Generated by Background Development

AM PEAK HOUR
PM PEAK HOUR
000/000

North
Schematic

Square 235
Washington, DC

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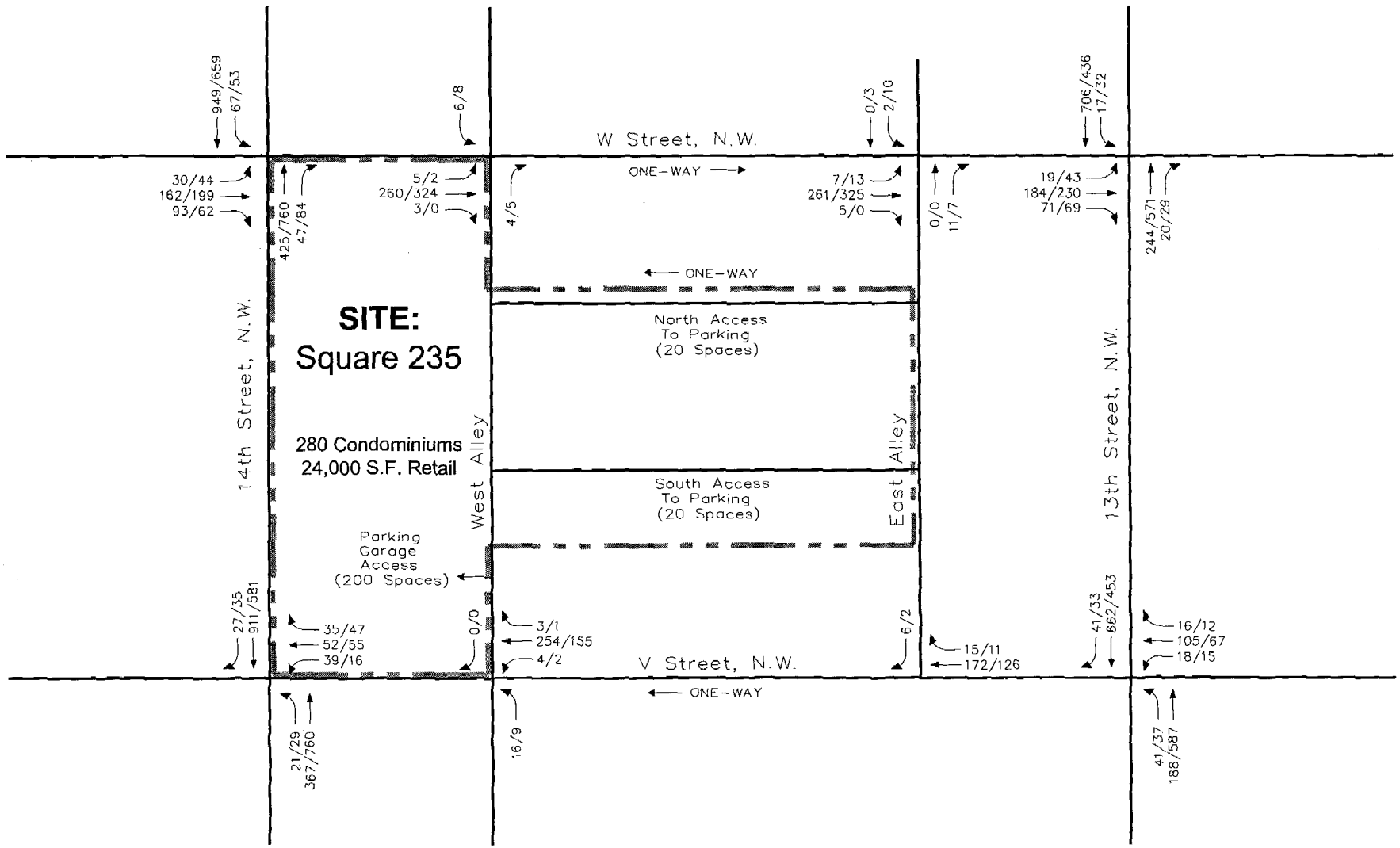
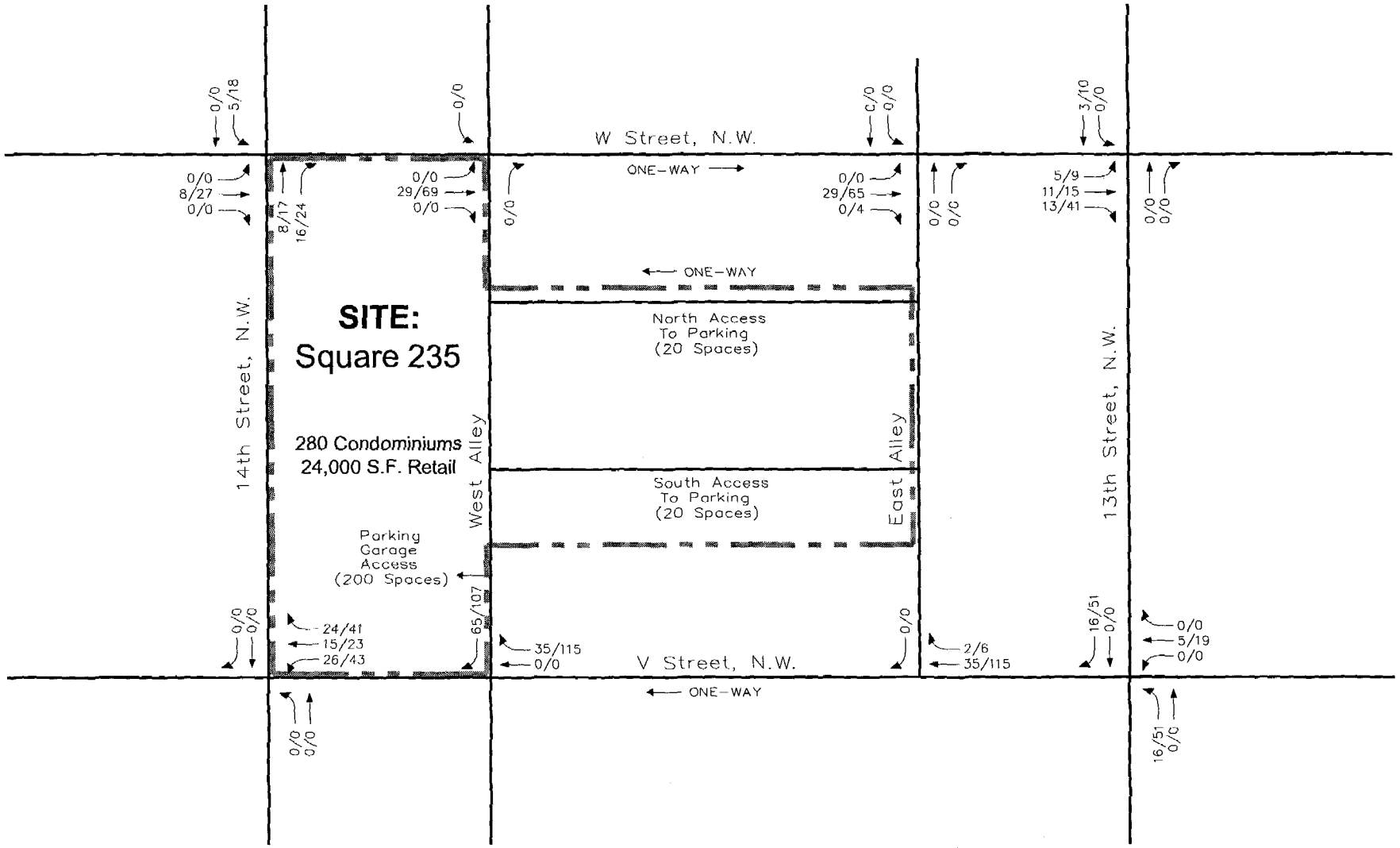


Figure 6
Background Traffic Volumes (2007)

Square 235
Washington, DC

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C:\Projects\2001-2500\2099 Square 235\Graphics\2099_Lanes-RMears

Figure 7
Site-Generated Traffic

AM PEAK HOUR
PM PEAK HOUR
000/000

North
Schematic

Square 235
Washington, DC

WELLS & ASSOCIATES, LLC.
TRAFFIC, TRANSPORTATION, and PARKING CONSULTANTS

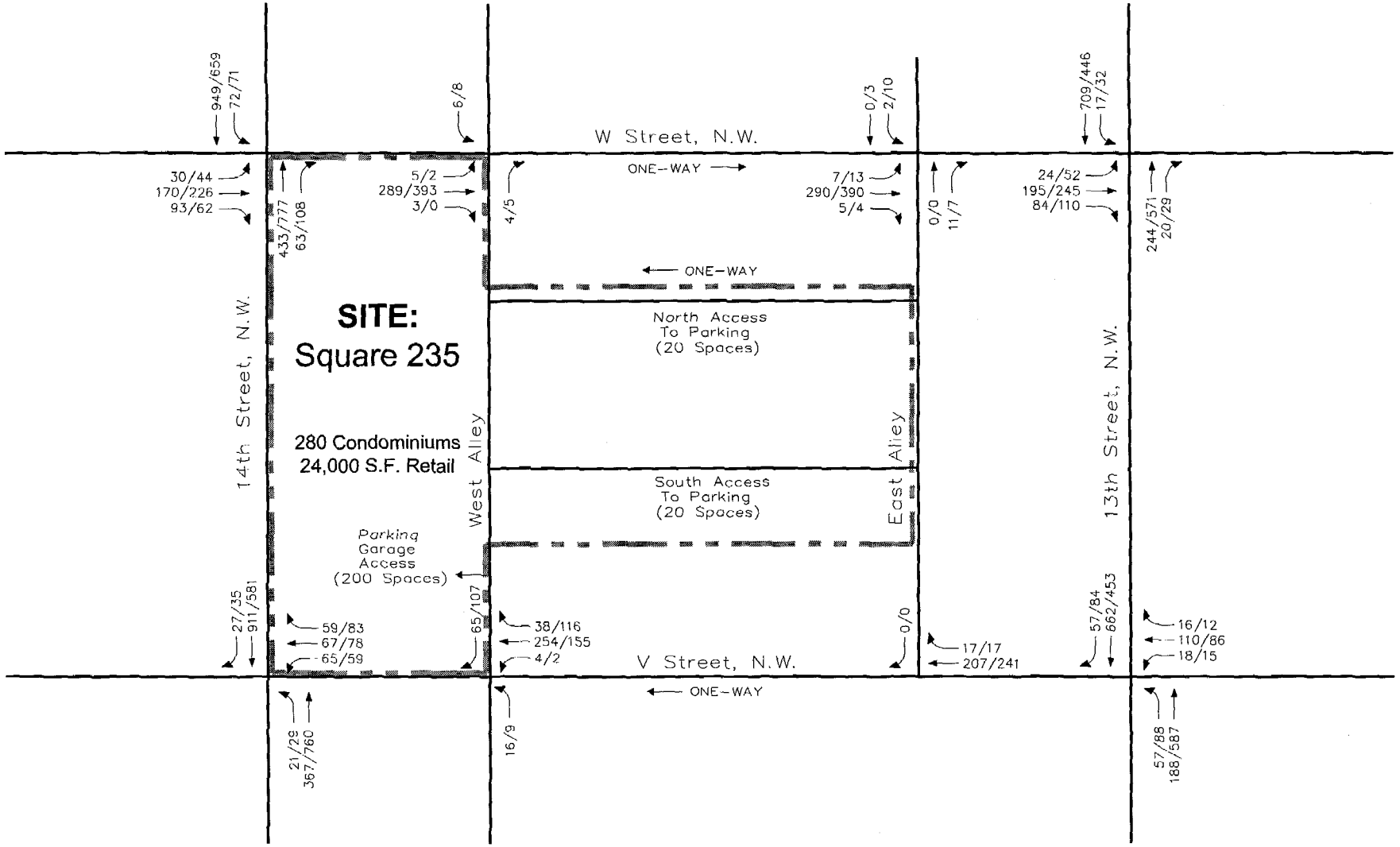


Figure 8
Total Future Traffic (2007)

Square 235
Washington, DC

WELLS & ASSOCIATES, LLC.
TRAFFIC, TRANSPORTATION, and PARKING CONSULTANTS

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Table 1
Square 235
Level of Serivce Summary **(1,2)**

Intersection	Operating Condition	Critical Movement	Existing 2003 AM Peak	Existing 2003 PM Peak	Background 2007 AM Peak	Background 2007 PM Peak	Total Future 2007 AM Peak	Total Future 2007 PM Peak
1. 14th St and W St	Signalized	EB	C (31.9)	C (32.2)	C (32.4)	C (32.8)	C (33.0)	C (34.3)
		NB	B (12.3)	B (14.6)	B (12.4)	B (15.0)	B (12.6)	B (15.3)
		SB	D (43.7)	B (19.3)	D (53.9)	C (20.5)	D (53.6)	C (20.6)
		Overall	**C (33.6)**	**B (19.3)**	**D (39.4)**	**C (20.0)**	**D (39.0)**	**C (20.6)**
2. W St and North Alley (west)	Unsignalized	EBL/T/R	A [7.3]	A [7.3]	A [7.3]	A [7.3]	A [7.3]	A [7.3]
		NBT/R	A [10.0]	B [10.5]	B [10.0]	B [10.6]	B [10.2]	B [11.2]
		SBL/T	B [10.9]	B [11.2]	B [10.9]	B [11.4]	B [11.2]	B [12.0]
3. W St and North Alley (east)	Unsignalized	EBL/T/R	A [7.6]	A [7.6]	A [7.6]	A [7.6]	A [7.6]	A [7.6]
		NBT/R	B [10.4]	B [10.7]	B [10.5]	B [10.8]	B [10.7]	B [11.4]
		SBL/T	B [11.7]	B [14.0]	B [11.8]	B [14.2]	B [12.0]	C[15.4]
4. 13th St and W St	Signalized	EB	C (31.7)	D (35.1)	C (32.2)	D (36.1)	C (34.2)	D (41.7)
		NB	B (11.9)	B (17.2)	B (12.1)	B (18.0)	B (12.1)	B (16.7)
		SB	C (20.0)	B (13.8)	C (21.1)	B (14.2)	C (21.3)	B (13.4)
		Overall	**C (20.9)**	**C (20.5)**	**C (21.6)**	**C (21.1)**	**C (22.5)**	**C (22.5)**
5. 14th St and V St	Signalized	WB	C (27.6)	C (26.9)	C (27.4)	C (27.7)	C (30.5)	C (32.1)
		NB	B (10.4)	B (12.2)	B (10.2)	B (13.0)	B (10.6)	B (13.0)
		SB	B (13.2)	B (10.8)	B (13.0)	B (11.4)	B (13.5)	B (11.4)
		Overall	**B (13.7)**	**B (12.8)**	**B (13.5)**	**B (13.5)**	**B (14.9)**	**B (15.1)**
6. 13th St and V St	Signalized	WB	C (27.9)	C (26.7)	C (28.1)	C (26.8)	C (28.3)	C (27.3)
		NB	B (18.0)	B (17.3)	B (11.5)	B (18.2)	B (12.8)	C (32.6)
		SB	B (18.6)	B (13.8)	B (19.7)	B (14.2)	C (20.7)	B (15.5)
		Overall	**B (19.2)**	**B (16.6)**	**B (19.1)**	**B (17.2)**	**B (20.0)**	**C (25.2)**
7. V St and South Alley (west)	Unsignalized	WBL/T/R	A[7.4]	A [7.3]	A[7.4]	A [7.3]	A[7.4]	A [7.3]
		NBL/T	NA	NA	B[11.1]	B[10.1]	B[12.3]	B[12.0]
		SBR	B[10.1]	A[9.4]	B [10.2]	A[9.4]	B [11.0]	B[10.7]
8. V St and South Alley (east)	Unsignalized	SBR	A[9.5]	A[9.3]	A[9.6]	A [9.3]	A[9.8]	B[10.1]

(1) Capacity analyses based on the updated Highway Capacity Manual software, 2000, Version 4.1c, with optimized traffic signal timings.

(2) Numbers in parenthsis and brackets represent average delay per vehicle in seconds.

Table 2
Square 235
Background Trip Generation Analysis **(1)**

Land Use	Size	Units	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Average Daily Traffic
Langston Hughes Trip Generation Analysis									
Residential Condominium (ITE Code 230)	80	units	7	36	43	34	17	51	538
Reduction for Transit Use **(2)**	50%		4	18	22	17	9	26	269
Net New Residential Trips			4	18	22	17	9	26	269
Retail (ITE Code 820)	7,500	S.F.	21	13	34	55	59	114	1,289
Reduction for Transit Use **(2)**	35%		7	5	12	19	21	40	451
Net New Retail Trips			14	9	22	35	38	74	838
Total Langston Hughes Site-Generated Trips			**17**	**27**	**44**	**52**	**47**	**99**	**1,107**
Ellington Plaza Apartments Trip Generation Analysis									
Apartments (ITE Code 220)	207	units	17	89	106	88	43	131	1,375
Reduction for Transit Use **(2)**	50%		9	45	53	44	22	66	688
Net New Residential Trips			**9**	**45**	**53**	**44**	**22**	**66**	**688**
Total Background Development Trips			**26**	**71**	**97**	**96**	**68**	**165**	**1,794**

Appendix A

Environmental Impact Screening Form (EISF)

DISTRICT OF COLUMBIA GOVERNMENT
DEPARTMENT OF CONSUMER AND REGULATORY AFFAIRS
BUILDING AND LAND REGULATION ADMINISTRATION
941 North Capitol Street NE, Suite 2000
Washington DC 20002

ENVIRONMENTAL IMPACT SCREENING FORM (EISF)

The Environmental Impact Screening Form (EISF) is designed to help applicants and District government agencies to determine whether or not a major action, as defined in DC Law 8-36, (District of Columbia Environmental Policy Act of 1989), would likely result in significant adverse environmental impacts, either during the construction or operational phase of a project. The EISF review process provides an orderly and comprehensive procedure that permits the introduction of information that is tailored to the specific project or actions proposed. **Please note that, pursuant to the Environmental Policy Act Regulations (Chapter 72, Title 20 DCMR), no agency is permitted to issue a license, permit, certificate or authorization until the environmental impact review process is completed.**

The Department of Consumer and Regulatory Affairs will transmit your EISF and supporting documents to other agencies for their review, including the Department of Health, the Department of Public Works, the Office of Planning and the DC Water and Sewer Authority. To expedite review of your submission, it is important that the information you provide is as complete and comprehensive as possible.

In addition to the EISF, your submission must include:

1. 20 copies of a vicinity map of approximately a one-mile radius, showing neighborhood names, institutional uses, shopping centers, fire and police stations, metro stations, parks and public space.
2. One copy of a site plan (24" x 36") showing existing conditions, with a narrative that describes existing topographic and drainage conditions, including location and names of any wetlands, streams and water courses on and/or adjacent to the property.
3. 20 copies of a detailed site plan.
4. 20 copies of a context map, showing buildings, uses and building heights for a one-block radius.
5. One copy of a separate plan (24" x 36") showing conceptual erosion and sediment control measures for the project, including proposed grading and total square footage of disturbed earth.
6. One copy of a separate plan (24" x 36") showing conceptual storm water management measures and their location(s), including drainage layout. No storm water management computations are required for this initial phase.
7. 20 copies of a brief written summary of the project (one page is sufficient)

You may attach additional information that will assist you to accurately describe your project. This information could be in the form of a narrative description of the project, brochures describing the project or processing equipment, geotechnical reports, soil surveys, phase one and phase two environmental assessments, traffic surveys, air quality analyses, or any other information, which may assist reviewing agencies.

Submit 20 copies of the completed EISF and supporting documents to the Department of Consumer and Regulatory Affairs (DCRA), Building and Land Regulation Administration (BLRA). Do not submit bound documents.

Each applicant will be notified regarding DCRA's findings within 30 business days of receipt of an EISF, unless additional information has been requested by a reviewing agency. DCRA's findings will indicate whether or not the proposed project is likely to have substantial negative impact on the community, and whether or not an Environmental Impact Statement (EIS) is required.

I. PROJECT INFORMATION

Name of Project		
Location of Project (Street Address)	Lot	Square
Name of Applicant	Telephone	
Email Address	Fax	
Mailing Address		
City	State	Zip
Name of Authorized Agent	Telephone	Fax
Mailing Address		
City	State	Zip
Name of Owner	Telephone	Fax
Mailing Address		
City	State	Zip

Please complete each question – indicate N/A if not applicable

II. EXISTING CONDITIONS

1. Present land use:
   a. Industrial ___
      Commercial ___
      Residential ___
      Public/Institutional ___
      Other _____
   b. Percent of impervious area _____%
   c. Floor Area Ratio _____ Gross Floor Area _____ Building Height _____
   d. Number and type of dwelling units _____
2. What is the current zoning classification of the site? _____
3. Have any zoning conditions been placed on the site? _____ If yes, cite case number _____
4. What are the predominant land uses and zoning classifications within a ¼ mile radius of the project site?
   _____
5. Total size of project land area: _____ (square feet/acres)
6. What is the predominant soil type on the project site? _____
7. Is there any contaminated soil within the project limits? Yes _____ No _____
8. What is the Federal Emergency Management Administration (FEMA) flood designation for the project?
   _____

A-2

9. Approximate percentage of slopes on project site:
   0-10% _____
   11-15% _____
   greater than 15% _____

10. List all adjacent properties with description of current use of each:
_____
_____
_____

11. List any adjacent properties or buildings that are listed on the National Register of Historic Places:
_____
_____

12. What is the depth of the water table in feet at the project site, if known? _____
Provide source of data (e.g. soil boring on-site monitoring well data on adjacent property, etc.)
_____

13. Does the project site contain any species of plant or animal that is identified as threatened or endangered? Yes _____ No _____ if yes, identify each species _____

14. Are any streams within 100 feet of the project site? Yes ____ No ____ If yes, name the stream and the river to which it is a tributary _____

15. Are any lakes, ponds, springs or wetlands within 100 feet of the project site? Yes ____ No ____ If yes, provide name and size
_____

16. Is the site served by existing public utilities? Gas____ Electric____ Water____ Sanitary Sewer____ Storm Sewer____ Combined Sewer ____

17. Do you plan to connect to existing water, sanitary, storm and combined sewers? If so, what size?
_____

18. What are the existing average and peak sewage flows generated by the existing facilities? _____(GPM)

19. What are the distances from the property line to the public water, sanitary, storm and combined sewers?
_____

20. Has the site ever been used as a landfill, construction fill or for the disposal of solid waste?
Yes ____ No ____

21. What are the pre-development peak storm water runoff flows for a 2-year and 15-year storm event?
_____

III. PROJECT DESCRIPTION

1. Proposed land use:
   Industrial ___
   Commercial ___
   Residential ___
   Public/Institutional ___
   Other _____

2. Project area to be developed: _____ (sq. ft./acres)
   Project area to remain undeveloped: _____ (sq. ft./acres)
   Dimensions of proposed structure: height _____ width _____ length _____
   Gross floor area of proposed structure: _____sq. ft.
   Depth of any excavation: average _____ (ft) maximum _____ (ft)
   Percent of impervious cover after development _____ %

3. Does the proposed action require a planning or zoning decision? Yes____ No____
   If yes, indicate decision required:
   - Zoning variance ____
   - Special exception ____
   - Special use permit ____
   - Subdivision large tract review ____
   - Historic Preservation Review Board ____
   - Other _____

4. Number and type of dwelling units, if any: _____

5. If commercial, office or institutional use, the number of employees _____

6. Provide the modal split of residents, employees and daily customers/visitors (i.e., how many would be expected to arrive by automobile/mass transit/walking/bicycle)_____

---

7. Provide the estimated number of peak hour morning (6:30 AM – 9:30 AM) and evening (4:30 PM – 6:30 PM) vehicular trips into and out of the property AM = 102 (37 IN - 65 OUT) PM = 231 (125 IN - 107 OUT)

8. Provide the location of parking entry, drop off areas and pedestrian entry
   PARKING ENTRIES FROM ALLEYS BETWEEN 13TH & 14TH STREETS, PED ENTRY FROM 14TH STREET

9. Cite the number of daily deliveries by truck, if any, and location of loading area, if any LOADING AREA FROM ALLEY FOR BOTH RETAIL & RESIDENTIAL

10. Will the proposed project contain residential premises, apartment dwellings, a subdivision or other housing complex designed to house 50 or more families? Yes ✓ No _____

11. Will the proposed project provide 50 or more new parking spaces? Yes ✓ No ____

12. Will the proposed project consist of shopping and /or commercial facilities having 50,000 or more square feet of gross floor space? Yes____ No ✓

13. Will the proposed project consist of entertainment and /or recreational facilities, including but not limited to theaters, auditorium, sports stadiums, bowling alleys, etc. having the capacity to accommodate more than 400 persons at one time? Yes ____ No ✓

14. Will the proposed project increase traffic volume, which would result in a street volume – to capacity ratio? of 0.90, or greater (Street Level-of- Service E or F)? Yes____ No ✓

15. Will the proposed project increase traffic volume that would result in a vehicle delay of 55 or more? seconds at any signalized intersection? (Intersection Level- of – Service E or F) Yes ____ No ✓

NOTE: *If you answered yes to any of questions 10 through 15, you are required to submit three copies of an air quality analysis of emissions (in pounds or tons of pollutants per day) of Carbon Monoxide (CO), volatile organic compounds (VOCs), and nitrogen oxide (NOx) resulting from the operation of mobile sources associated with the proposed project. The most current version of the U.S. Environmental Protection Agency's (EPA's) " MOBILE " emission factor model must be used in deriving the emission estimates. In addition, an analysis of the impact from mobile sources on CO concentrations (in parts per million) in the vicinity of the proposed project must also be provided. This analysis, at a minimum, must be conducted in accordance with the procedures identified in the Department of Health's "Guidance on the Review of Air Quality Studies Performed as a Result of the EISF" using an approved dispersion model (the default model is the latest version of CALQCHR3 posted on the EPA regulatory model website) and must include a comparison of the resulting air quality of the resulting air quality with both the one (1) hour average and eight (8) hour average National Ambient Air Quality Standards (NAAQS) for CO.*

16. Will the proposed project result in an emission into the atmosphere of odorous or other air pollutants from any source, in any quality and of any characteristic and duration which is or is likely to be injurious to the public health or welfare, or which interferes with the reasonable enjoyment of life and property?
    Yes ___ No ____ if yes, describe: _____

17. How much natural material (rock, earth, etc.) will be removed from the site? _____ (tons/cubic yards)

18. How much vegetation will be removed from the site? _____ (sq. ft./acres)

19. Will any mature trees or other locally important vegetation be removed from the site? Yes ____ No ____

20. Will construction be on land where the depth to the water table is less than 3 feet? Yes ____ No ____

21. What are the projected average and peak sewage flows to be generated by this project? _____

22. What water demand for peak domestic and peak fire protection will result from this project?
_____

23. What are the peak storm flows for a 2-year and 15-year event that will result from this project?
_____

24. Will pumping of ground water be required at the site during and/or after the project is completed?
Yes____ No ____
    a. If yes, explain the purpose (e.g. sump for dewatering; continuous for industrial use)
    _____
    b. The expected pumping rate is _____ gallons per day

25. Will construction be on land where the bedrock is exposed or is within 3 feet of the existing ground surface? Yes ____ No ____

26. Will the construction disturb more than 5,000 square feet of soil? Yes____ No ____

27. Will contaminated soil be disturbed by the construction of pipelines? Yes ____ No ____

28. Will the disturbed area be reclaimed? Yes ____ No ____
    a. If yes, for what intended purpose is the site being reclaimed? _____

29. If the project is single-phased, provide the length of construction: ____ months (including demolition)

30. If the project is multi-phased:
    a. Total number of phases anticipated: _____
    b. Anticipated date of commencement of Phase1: month _____ year _____
    c. Anticipated date of completion of final phase: month _____ year _____
    d. Is Phase 1 functionally dependent on subsequent phases? Yes ____ No ____

31. Will blasting occur during construction? Yes ____ No ____

32. Will the surface area of an existing water body be increased or decreased by the project?
Yes ____ No ____ If yes , explain_____

33. Will the proposed project interfere with ground water recharge? Yes ____ No ____

34. Will the proposed project adversely affect existing surface water quality? Yes ____ No ____

35. Is the project or any portion of the project in a 100-year flood plain? Yes ____ No ____

36. Will liquid waste be generated, either during construction or afterwards? Yes ____ No ____
    a. If yes, indicate type of waste (chemical, industrial, sewage, etc.) and amount:
    _____
    b. How will this waste be disposed of?
    _____

37. Will the project generate solid, medical, infectious, radioactive or other hazardous waste? Yes ____ No __
    a. If yes, what is the type and amount per month?
        type: _____
        amount: _____
    b. Will any existing waste disposal facility be used? Yes ____ No ____
        name of facility _____
        location: _____
    c. Will any waste not go into a waste disposal facility? Yes ____ No ____
        If Yes, explain_____

38. Will the project produce odors? Yes ____ No ____
    If yes, describe source of odor and duration _____

39. Will the project produce noise during construction that is above the allowable level (80db)? Yes ____ No ____

40. Will the operating noise level exceed the allowable decibel level for that zone? Yes ____ No ____

41. Will a pile driver be used during construction? Yes ____ No ____

42. Where will the A/C unit be located? _____

43. Will the project operation maintain an emergency generator? Yes ____ No ____ If yes, where will the generator be located?
_____

44. Where will other motor driven equipment be located? _____

45. Will the project operation have frequent deliveries by large vehicles? Yes ____ No _____

46. Will any underground storage tanks be installed? Yes ____ No ____
    a. If yes, how many tanks will be installed? _____
    b. Contents: _____
    c. Capacity: _____ (gallons)

47. Will pesticides (herbicides, insecticide, etc.) be used? Yes ____ No ____ If yes, indicate the type of pesticide and provide the name of the licensed applicator who will apply the pesticide _____
_____

48. Will any other substances that will adversely change existing surface and ground water quality be handled at the site either during or after construction? Yes ____ No ____ If yes, attach pollution prevention plan.

49. Will the proposed project require the issuance of any permits or other approvals (Certificate of Occupancy, Public Space Permit, Raze Permit, Air Pollution Permit, Storm water Management Permit, Pretreatment Permit, etc.) from the District Government in addition to a Building Permit? Yes ____ No ____ If yes, list all required permits: _____

50. Will the proposed project require the issuance of any permits or other approvals (NPDES, Section 404 Degree and Fill Permit, etc.) from the Federal Government? Yes ____ No ____
    If yes, list all required permits:
_____

51. How will solid waste (trash, garbage, debris) generated by occupants of the project be managed? _____
_____

52. How will recyclable materials generated by occupants of the project be managed? _____
_____

53. What plans will be implemented to maintain the abutting public space free of litter and debris during construction and post-occupancy?
_____
_____

IV. VERIFICATION

I certify that all of the statements on this application are true and complete to the best of my knowledge and belief. I agree to comply with all applicable laws and regulations of the District of Columbia. The making of false statements on this application is punishable by criminal penalties (DC Code Ann. Sec. 22-2514)

Applicant/Authorized Agent (Signature) _____

Name (Print) _____ Date _____

Company _____ Title _____

Address _____

TO REPORT WASTE, FRAUD, OR ABUSE BY ANY DC GOVERNMENT OFFICE OR OFFICIAL, CALL THE INSPECTOR GENERAL ON 1-800-521-1639

2/2002

A-6

Appendix B

Existing Traffic Count Summaries

Wells & Associates, LLC

McLean, Virginia

Existing Traffic Count

PROJECT:	Square 235	DATE:	10/16/2003	SOUTHBOUND ROAD:	Alley	
W & A JOB NO.:	2099	DAY:	Thursday	NORTHBOUND ROAD:		
INTERSECTION:	V Street & Alley	WEATHER:	Clear	WESTBOUND ROAD:	V Street	
LOCATION:	Washington,DC	COUNTED BY:	Matt	EASTBOUND ROAD:	V Street	
		INPUTED BY:	Di			

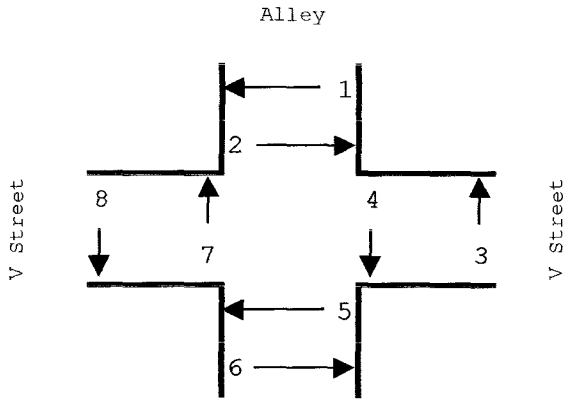
Time Period	Turning Movements: Southbound Alley 1 Right	2 Thru	3 Left	Total	Westbound V Street 4 Right	5 Thru	6 Left	Total	Northbound 0 7 Right	8 Thru	9 Left	Total	Eastbound V Street 10 Right	11 Thru	12 Left	Total	North & South	East & West	Total	PHF	Time Period
AM																					
6:00-6:15	0	0	0	0	0	10	0	10	0	0	0	0	0	0	0	0	0	10	10		6:00-6:15
6:15-6:30	0	0	0	0	0	5	0	5	0	0	0	0	0	0	0	0	0	5	5		6:15-6:30
6:30-6:45	0	0	0	0	0	13	0	13	0	0	0	0	0	0	0	0	0	13	13		6:30-6:45
6:45-7:00	0	0	0	0	1	17	0	18	0	0	0	0	0	0	0	0	0	18	18		6:45-7:00
7:00-7:15	1	0	0	1	0	11	0	11	0	0	0	0	0	0	0	0	1	11	12		7:00-7:15
7:15-7:30	0	0	0	0	0	12	0	12	0	0	0	0	0	0	0	0	0	12	12		7:15-7:30
7:30-7:45	2	0	0	2	1	37	0	38	0	0	0	0	0	0	0	0	2	38	40		7:30-7:45
7:45-8:00	3	0	0	3	0	38	0	38	0	0	0	0	0	0	0	0	3	38	41		7:45-8:00
8:00-8:15	2	0	0	2	5	59	0	64	0	0	0	0	0	0	0	0	2	64	66		8:00-8:15
8:15-8:30	0	0	0	0	7	49	0	56	0	0	0	0	0	0	0	0	0	56	56		8:15-8:30
8:30-8:45	2	0	0	2	2	58	0	60	0	0	0	0	0	0	0	0	2	60	62		8:30-8:45
8:45-9:00	2	0	0	2	1	49	0	50	0	0	0	0	0	0	0	0	2	50	52		8:45-9:00
3 Hour Totals	**12**	**0**	**0**	**12**	**17**	**358**	**0**	**375**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**12**	**375**	**387**		
1 Hour Totals																					
6:00-7:00	0	0	0	0	1	45	0	46	0	0	0	0	0	0	0	0	0	46	46	0.64	6:00-7:00
6:15-7:15	1	0	0	1	1	46	0	47	0	0	0	0	0	0	0	0	1	47	48	0.67	6:15-7:15
6:30-7:30	1	0	0	1	1	53	0	54	0	0	0	0	0	0	0	0	1	54	55	0.76	6:30-7:30
6:45-7:45	3	0	0	3	2	77	0	79	0	0	0	0	0	0	0	0	3	79	82	0.51	6:45-7:45
7:00-8:00	6	0	0	6	1	98	0	99	0	0	0	0	0	0	0	0	6	99	105	0.64	7:00-8:00
7:15-8:15	7	0	0	7	6	146	0	152	0	0	0	0	0	0	0	0	7	152	159	0.60	7:15-8:15
7:30-8:30	7	0	0	7	13	183	0	196	0	0	0	0	0	0	0	0	7	196	203	0.77	7:30-8:30
7:45-8:45	7	0	0	7	14	204	0	218	0	0	0	0	0	0	0	0	7	218	225	0.85	7:45-8:45
8:00-9:00	6	0	0	6	15	215	0	230	0	0	0	0	0	0	0	0	6	230	236	0.89	8:00-9:00
AM Peak 8:00-9:00	**6**	**0**	**0**	**6**	**15**	**215**	**0**	**230**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**230**	**236**	**0.89**	**AM Peak 8:00-9:00**
PM																					
4:00-4:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		4:00-4:15
4:15-4:30	0	0	0	0	2	32	0	34	0	0	0	0	0	0	0	0	0	34	34		4:15-4:30
4:30-4:45	0	0	0	0	1	10	0	11	0	0	0	0	0	0	0	0	0	11	11		4:30-4:45
4:45-5:00	1	0	0	1	0	35	0	35	0	0	0	0	0	0	0	0	1	35	36		4:45-5:00
5:00-5:15	1	0	0	1	1	42	0	43	0	0	0	0	0	0	0	0	1	43	44		5:00-5:15
5:15-5:30	0	0	0	0	0	39	0	39	0	0	0	0	0	0	0	0	0	39	39		5:15-5:30
5:30-5:45	1	0	0	1	2	39	0	41	0	0	0	0	0	0	0	0	1	41	42		5:30-5:45
5:45-6:00	1	0	0	1	2	42	0	44	0	0	0	0	0	0	0	0	1	44	45		5:45-6:00
6:00-6:15	2	0	0	2	4	45	0	49	0	0	0	0	0	0	0	0	2	49	51		6:00-6:15
6:15-6:30	0	0	0	0	4	45	0	49	0	0	0	0	0	0	0	0	0	49	49		6:15-6:30
6:30-6:45	0	0	0	0	1	43	0	44	0	0	0	0	0	0	0	0	0	44	44		6:30-6:45
6:45-7:00	0	0	0	0	2	49	0	51	0	0	0	0	0	0	0	0	0	51	51		6:45-7:00
3 Hour Totals	**6**	**0**	**0**	**6**	**19**	**421**	**0**	**440**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**440**	**446**		
1 Hour Totals																					
4:00-5:00	1	0	0	1	3	77	0	80	0	0	0	0	0	0	0	0	1	80	81	0.56	4:00-5:00
4:15-5:15	2	0	0	2	4	119	0	123	0	0	0	0	0	0	0	0	2	123	125	0.71	4:15-5:15
4:30-5:30	2	0	0	2	2	126	0	128	0	0	0	0	0	0	0	0	2	128	130	0.74	4:30-5:30
4:45-5:45	3	0	0	3	3	155	0	158	0	0	0	0	0	0	0	0	3	158	161	0.91	4:45-5:45
5:00-6:00	3	0	0	3	5	162	0	167	0	0	0	0	0	0	0	0	3	167	170	0.94	5:00-6:00
5:15-6:15	4	0	0	4	8	165	0	173	0	0	0	0	0	0	0	0	4	173	177	0.87	5:15-6:15
5:30-6:30	4	0	0	4	12	171	0	183	0	0	0	0	0	0	0	0	4	183	187	0.92	5:30-6:30
5:45-6:45	3	0	0	3	11	175	0	186	0	0	0	0	0	0	0	0	3	186	189	0.93	5:45-6:45
6:00-7:00	2	0	0	2	11	182	0	193	0	0	0	0	0	0	0	0	2	193	195	0.96	6:00-7:00
PM Peak 6:00-7:00	**2**	**0**	**0**	**2**	**11**	**182**	**0**	**193**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**193**	**195**	**0.96**	**PM Peak 6:00-7:00**

Wells & Associates, LLC
McLean, Virginia

Pedestrian Volume Survey

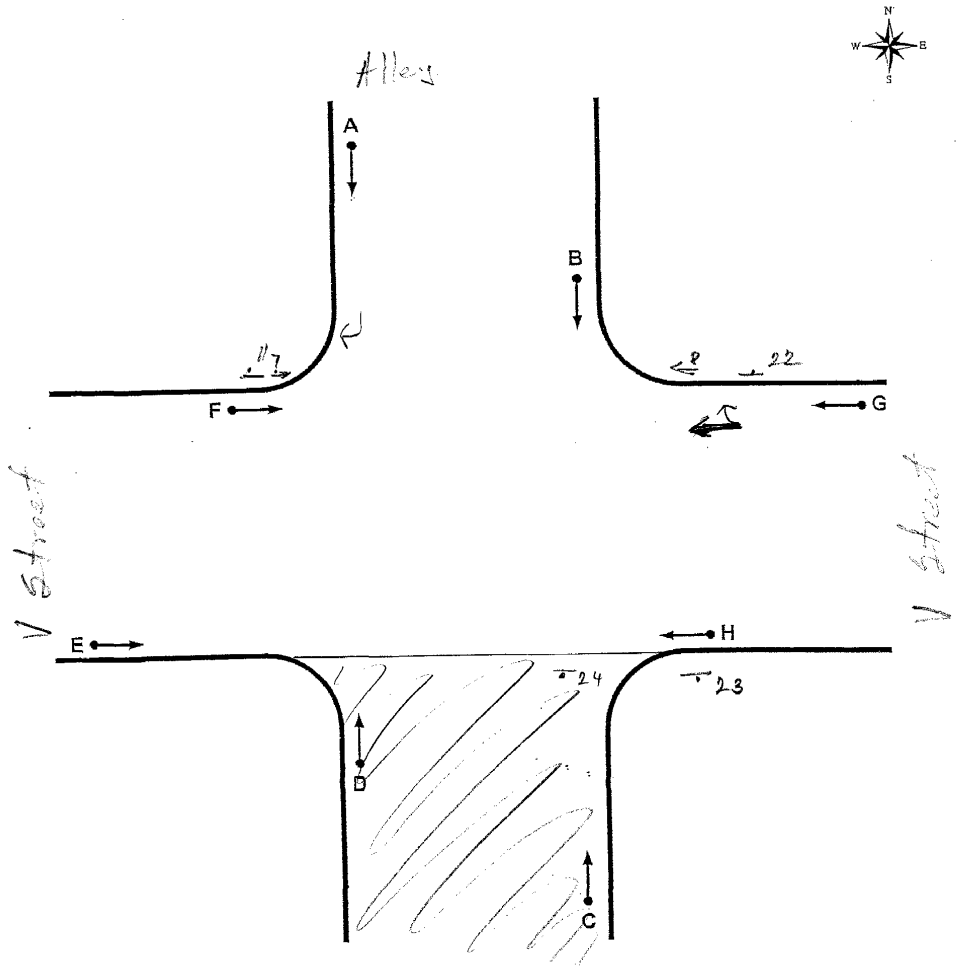
North

Project Name:	Square 235
Project Number:	2099
Location:	Washington, DC
Intersection:	V Street & Alley
Weather:	Clear
Date:	10/16/2003
Surveyor:	Matt
Hours:	



TIME	Movement							
	1	2	3	4	5	6	7	8
AM								
6:00-6:15		1						
6:15-6:30					1	9		
6:30-6:45	1				2			
6:45-7:00						4	1	3
7:00-7:15	2	3			3		2	
7:15-7:30					1			
7:30-7:45	1			2	4			
7:45-8:00	2	3		1	2	2		
8:00-8:15	3	2			2	3		
8:15-8:30	4	6			2	1		
8:30-8:45	8	2			1	3		
8:45-9:00	1	2			3	5		
PM								
4:00-4:15	10	2	4	1	5	2		
4:15-4:30			1		10			1
4:30-4:45	2	6		2	2	1		
4:45-5:00	4	3	2	2	1	6	3	1
5:00-5:15	3	8	3	5	1	5	8	1
5:15-5:30	5	5			1	2	1	
5:30-5:45	5	6			5	4		1
5:45-6:00	3	2	1			2	4	3
6:00-6:15	2	2		2	1	1		
6:15-6:30		1	1	1	1	3		
6:30-6:45	2	4		2	3	2	8	2
6:45-7:00	8	2			3	2	2	2

WELLS & ASSOCIATES, LLC
TRANSPORTATION, TRAFFIC, AND PARKING CONSULTANTS



B-3

AM Phasing/Timing
Cycle Length =

G =	G =	G =	G =
Y/R =	Y/R =	Y/R =	Y/R =

PM Phasing/Timing
Cycle Length =

G =	G =	G =	G =
Y/R =	Y/R =	Y/R =	Y/R =

Posted Speed Limits

NB____mph SB____mph
EB____mph WB____mph

Transit Provider	Routes

Additional Notes: 11 - 7a.m. - 2:30 p.m. Zone 1
22 - No Parking 9:30 a.m. - 11:30 a.m. Tuesday
23 - 4 Hours Parking 7a.m. - 6:30 p.m.
24 - No Parking 12:30 p.m. - 2:30 p.m. Wednesday

1. Stop Sign
2. Yield Sign
3. Left Turn Yields on Green
4. No Left Turn
5. No Right Turn
6. One-Way
7. No Parking
8. No Stopping or Parking
9. No Turn on Red
10. One Hour Parking
11. Two Hour Parking
12. Three Hour Parking
13. Permit (Zone) Parking
14. No U-Turns
15. Bus Stop
16. Road Closed
17. Pedestrian Button
18. Pedestrian Countdown
19. Speed Limit Sign
20. Warning Sign
21. Lane Drop

V Street & Alley



Alley look. South to V Street



V Street look. East to Alley



Alley looking North



V Street look. West to Alley

Wells & Associates, LLC

McLean, Virginia

Existing Traffic Count

PROJECT:	Square 235	DATE:	10/16/2003	SOUTHBOUND ROAD:			
W & A JOB NO.:	2099	DAY:	Thursday	NORTHBOUND ROAD:	Alley		
INTERSECTION:	W Street & Alley	WEATHER:	Clear	WESTBOUND ROAD:	W Street		
LOCATION:	Washington,DC	COUNTED BY:	Dzevad	EASTBOUND ROAD:	W Street		
		INPUTED BY:	Di				

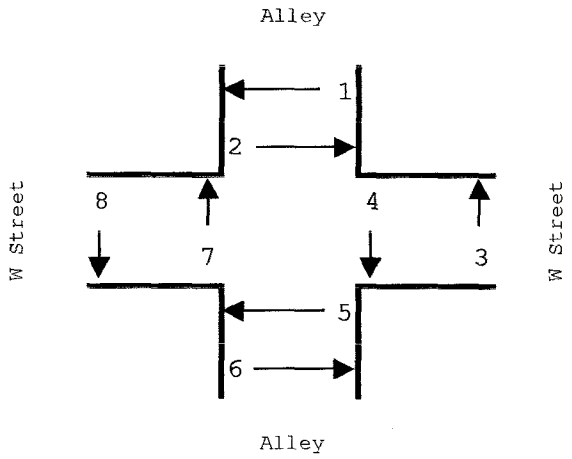
Time Period	Turning Movements																				Total	PHF	Time Period
	Southbound 0				Westbound W Street				Northbound Alley				Eastbound W Street				North & South	East & West					
	1 Right	2 Thru	3 Left	Total	4 Right	5 Thru	6 Left	Total	7 Right	8 Thru	9 Left	Total	10 Right	11 Thru	12 Left	Total							
AM																							
6:00-6:15	0	0	1	1	0	0	0	0	0	0	0	0	0	16	1	17	1	17	18		6:00-6:15
6:15-6:30	0	0	0	0	0	0	0	0	0	0	0	0	0	14	0	14	0	14	14		6:15-6:30
6:30-6:45	0	0	0	0	0	0	0	0	1	0	0	1	0	18	0	18	1	18	19		6:30-6:45
6:45-7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	28	1	29	0	29	29		6:45-7:00
7:00-7:15	0	0	0	0	0	0	0	0	0	0	0	0	1	22	1	24	0	24	24		7:00-7:15
7:15-7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	23	0	23	0	23	23		7:15-7:30
7:30-7:45	0	0	1	1	0	0	0	0	0	0	0	0	2	27	2	31	1	31	32		7:30-7:45
7:45-8:00	0	0	1	1	0	0	0	0	0	0	0	0	2	29	1	32	1	32	33		7:45-8:00
8:00-8:15	0	0	0	0	0	0	0	0	3	0	0	3	2	43	0	45	3	45	48		8:00-8:15
8:15-8:30	0	0	0	0	0	0	0	0	7	0	0	7	1	61	2	64	7	64	71		8:15-8:30
8:30-8:45	0	0	2	2	0	0	0	0	0	0	0	0	2	55	3	60	2	60	62		8:30-8:45
8:45-9:00	0	0	0	0	0	0	0	0	1	0	0	1	0	73	2	75	1	75	76		8:45-9:00
3 Hour Totals	**0**	**0**	**5**	**5**	**0**	**0**	**0**	**0**	**12**	**0**	**0**	**12**	**10**	**409**	**13**	**432**	**17**	**432**	**449**		
1 Hour Totals																					
6:00-7:00	0	0	1	1	0	0	0	0	1	0	0	1	0	76	2	78	2	78	80	0.69	6:00-7:00
6:15-7:15	0	0	0	0	0	0	0	0	1	0	0	1	1	82	2	85	1	85	86	0.74	6:15-7:15
6:30-7:30	0	0	0	0	0	0	0	0	1	0	0	1	1	91	2	94	1	94	95	0.82	6:30-7:30
6:45-7:45	0	0	1	1	0	0	0	0	0	0	0	0	3	100	4	107	1	107	108	0.84	6:45-7:45
7:00-8:00	0	0	2	2	0	0	0	0	0	0	0	0	5	101	4	110	2	110	112	0.85	7:00-8:00
7:15-8:15	0	0	2	2	0	0	0	0	3	0	0	3	6	122	3	131	5	131	136	0.71	7:15-8:15
7:30-8:30	0	0	2	2	0	0	0	0	10	0	0	10	7	160	5	172	12	172	184	0.65	7:30-8:30
7:45-8:45	0	0	3	3	0	0	0	0	10	0	0	10	7	188	6	201	13	201	214	0.75	7:45-8:45
8:00-9:00	0	0	2	2	0	0	0	0	11	0	0	11	5	232	7	244	13	244	257	0.85	8:00-9:00
AM Peak 8:00-9:00	**0**	**0**	**2**	**2**	**0**	**0**	**0**	**0**	**11**	**0**	**0**	**11**	**5**	**232**	**7**	**244**	**13**	**244**	**257**	**0.85**	**AM Peak 8:00-9:00**
PM																					
4:00-4:15	0	0	1	1	0	0	0	0	6	0	0	6	0	50	1	51	7	51	58		4:00-4:15
4:15-4:30	0	0	1	1	0	0	0	0	1	0	0	1	0	36	2	38	2	38	40		4:15-4:30
4:30-4:45	0	0	2	2	0	0	0	0	4	0	0	4	0	42	2	44	6	44	50		4:30-4:45
4:45-5:00	0	0	1	1	0	0	0	0	0	0	0	0	0	47	4	51	1	51	52		4:45-5:00
5:00-5:15	0	0	0	0	0	0	0	0	0	0	0	0	0	51	3	54	0	54	54		5:00-5:15
5:15-5:30	0	0	5	5	0	0	0	0	3	0	0	3	0	73	4	77	8	77	85		5:15-5:30
5:30-5:45	0	1	3	4	0	0	0	0	2	0	0	2	0	57	3	60	6	60	66		5:30-5:45
5:45-6:00	0	2	2	4	0	0	0	0	2	0	0	2	0	68	3	71	6	71	77		5:45-6:00
6:00-6:15	0	0	4	4	0	0	0	0	4	1	0	5	0	42	1	43	9	43	52		6:00-6:15
6:15-6:30	0	0	2	2	0	0	0	0	3	0	0	3	0	38	0	38	5	38	43		6:15-6:30
6:30-6:45	0	0	2	2	0	0	0	0	1	0	0	1	0	40	0	40	3	40	43		6:30-6:45
6:45-7:00	0	1	1	2	0	0	0	0	1	0	0	1	0	57	0	57	3	57	60		6:45-7:00
3 Hour Totals	**0**	**4**	**24**	**28**	**0**	**0**	**0**	**0**	**27**	**1**	**0**	**28**	**0**	**601**	**23**	**624**	**56**	**624**	**680**		
1 Hour Totals																					
4:00-5:00	0	0	5	5	0	0	0	0	11	0	0	11	0	175	9	184	16	184	200	0.86	4:00-5:00
4:15-5:15	0	0	4	4	0	0	0	0	5	0	0	5	0	176	11	187	9	187	196	0.91	4:15-5:15
4:30-5:30	0	0	8	8	0	0	0	0	7	0	0	7	0	213	13	226	15	226	241	0.71	4:30-5:30
4:45-5:45	0	1	9	10	0	0	0	0	5	0	0	5	0	228	14	242	15	242	257	0.76	4:45-5:45
5:00-6:00	0	3	10	13	0	0	0	0	7	0	0	7	0	249	13	262	20	262	282	0.83	5:00-6:00
5:15-6:15	0	3	14	17	0	0	0	0	11	1	0	12	0	240	11	251	29	251	280	0.82	5:15-6:15
5:30-6:30	0	3	11	14	0	0	0	0	11	1	0	12	0	205	7	212	26	212	238	0.77	5:30-6:30
5:45-6:45	0	2	10	12	0	0	0	0	10	1	0	11	0	188	4	192	23	192	215	0.70	5:45-6:45
6:00-7:00	0	1	9	10	0	0	0	0	9	1	0	10	0	177	1	178	20	178	198	0.83	6:00-7:00
PM Peak 5:00-6:00	**0**	**3**	**10**	**13**	**0**	**0**	**0**	**0**	**7**	**0**	**0**	**7**	**0**	**249**	**13**	**262**	**20**	**262**	**282**	**0.83**	**PM Peak 5:00-6:00**

Wells & Associates, LLC
McLean, Virginia

Pedestrian Volume Survey

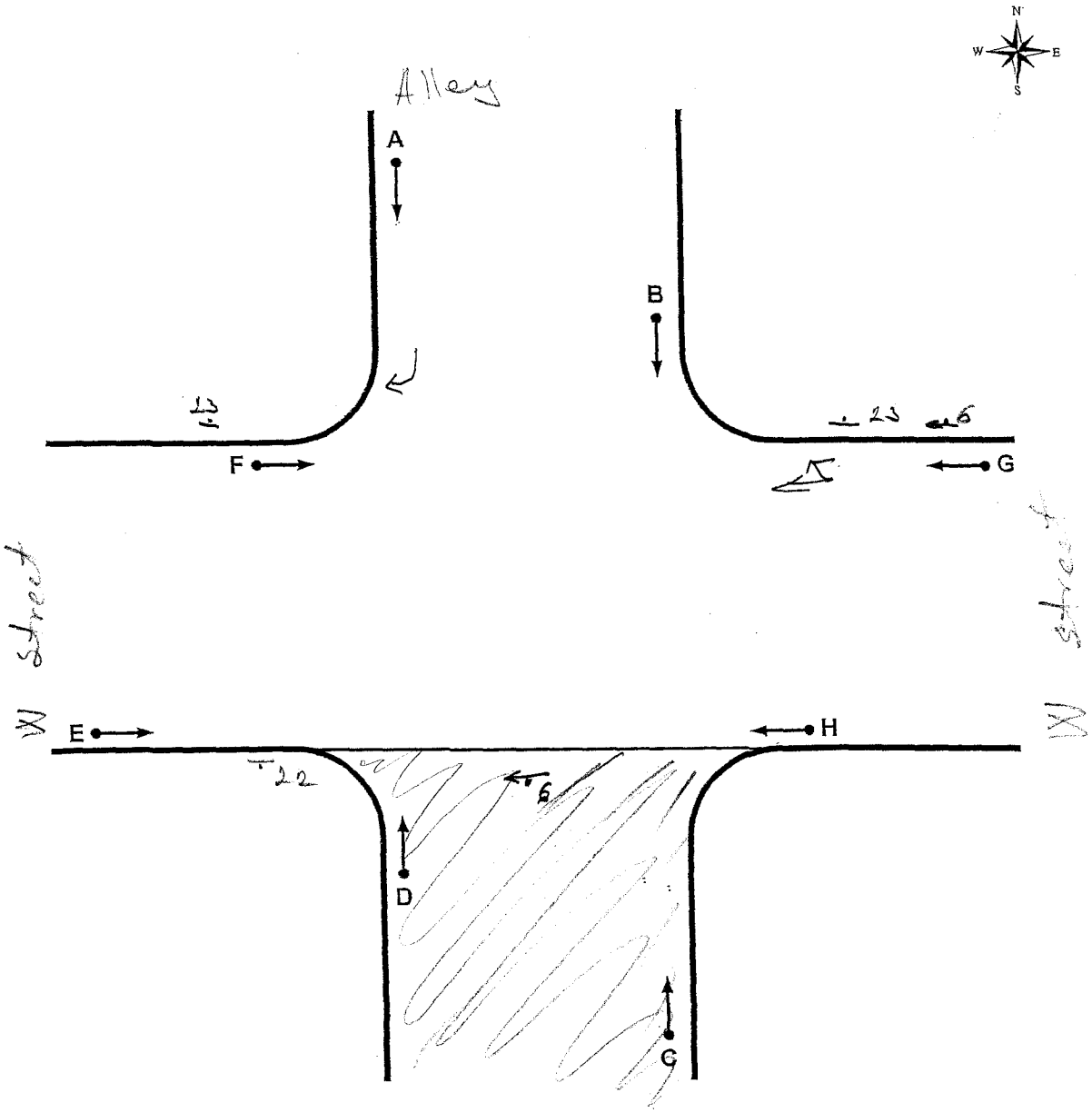
North

Project Name:	Square 235
Project Number:	3099
Location:	Washington, DC
Intersection:	N Street & Alley
Weather:	Clear
Date:	10/16/2003
Surveyor:	Dzevad
Hours:	



TIME	Movement							
	1	2	3	4	5	6	7	8
AM								
6:00-6:15	1	1				1	5	
6:15-6:30		1	1			2		
6:30-6:45	4			1		2		
6:45-7:00	4					1		
7:00-7:15	2	2			2	1		1
7:15-7:30	3	3			6	3	3	
7:30-7:45	5	5			1	1		
7:45-8:00	9	1		2		4	2	1
8:00-8:15	11	6			4			1
8:15-8:30	19	8	4		6	11		2
8:30-8:45	15	11	10	4	4	4	7	
8:45-9:00	12	2	3	1	1	2		1
PM								
4:00-4:15	11	13	4	7	2	3		
4:15-4:30	8	4	1	1	5	5		1
4:30-4:45	6	5	1	2	4	5		
4:45-5:00	7	10	2	7	4	4	2	1
5:00-5:15	12	17		2	3	1	2	
5:15-5:30	6	12	4		5	5		2
5:30-5:45	6	9	2		5	4		
5:45-6:00	11	20		2	1	4		2
6:00-6:15	5	18	2	1	4	7		
6:15-6:30	3	6	1	2	5	7		
6:30-6:45	3	2			1	2		
6:45-7:00	2	9				4		

WELLS & ASSOCIATES, LLC
TRANSPORTATION, TRAFFIC, AND PARKING CONSULTANTS



AM Phasing/Timing
Cycle Length =

G =	G =	G =	G =
Y/R =	Y/R =	Y/R =	Y/R =

PM Phasing/Timing
Cycle Length =

G =	G =	G =	G =
Y/R =	Y/R =	Y/R =	Y/R =

Posted Speed Limits
NB_____mph SB_____mph
EB_____mph WB_____mph

Transit Provider **Routes**

Additional Notes:
22- No parking 12:30pm - 2:30pm Wednesday
23 - No Parking 9:30am - 11:30am Tuesday

5-7

W Street & Alley



Alley looking South



W Street look. East to Alley



Alley look. North to W Street



W Street look. West to Alley

Appendix C

Capacity Analysis Worksheets for Existing Condition

HCS2000: Signalized Intersections Release 4.1d

Analyst: JBY
Agency: Wells & Associates, LLC
Date: 04/17/03
Period: AM Peak Hour
Project ID: 2099 Square 235
E/W St: W St

Inter.: 14th St and W St
Area Type: All other areas
Jurisd: Washington, DC
Year : Existing 2003

N/S St: 14th St

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	1	0	0	0	0	0	2	0	1	1	0
LGConfig		LTR						TR		L	T	
Volume	29	156	89					396	45	64	909	
Lane Width		12.0						12.0		12.0	12.0	
RTOR Vol			0						0			

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	P				NB Left			
Thru	P				Thru	P		
Right	P				Right	P		
Peds	X				Peds	X		
WB Left					SB Left	P		
Thru					Thru	P		
Right					Right			
Peds	X				Peds	X		
NB Right					EB Right			
SB Right					WB Right			
Green	34.0	0.0	0.0		57.0	0.0	0.0	0.0
Yellow	4.0	0.0			4.0		0.0	
All Red	2.0	0.0			2.0		0.0	

Cycle Length: 103.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
LTR	561	1699	0.54	0.33	31.9	C	31.9	C
Westbound								
Northbound								
TR	1923	3475	0.25	0.55	12.3	B	12.3	B
Southbound								
L	462	835	0.15	0.55	11.9	B		
T	1031	1863	0.98	0.55	46.0	D	43.7	D

Intersection Delay = 33.6 (sec/veh) IntersectionLOS = C

HCS2000: Signalized Intersections Release 4.1d

Analyst: JBY
Agency: Wells & Associates, LLC
Date: 04/17/03
Period: PM Peak Hour
Project ID: 2099 Square 235
E/W St: W St

Inter.: 14th St and W St
Area Type: All other areas
Jurisd: Washington, DC
Year : Existing 2003

N/S St: 14th St

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	1	0	0	0	0	0	2	0	1	1	0
LGConfig		LTR						TR		L	T	
Volume	42	191	60					723	81	51	623	
Lane Width		12.0						12.0		12.0	12.0	
RTOR Vol			0						0			

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	P				NB Left			
Thru	P				Thru	P		
Right	P				Right	P		
Peds	X				Peds	X		
WB Left					SB Left	P		
Thru					Thru	P		
Right					Right			
Peds	X				Peds	X		
NB Right					EB Right			
SB Right					WB Right			
Green	34.0	0.0	0.0		57.0	0.0	0.0	0.0
Yellow	4.0	0.0			4.0		0.0	
All Red	2.0	0.0			2.0		0.0	

Cycle Length: 103.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
LTR	583	1767	0.56	0.33	32.2	C	32.2	C
Westbound								
Northbound								
TR	1923	3474	0.46	0.55	14.6	B	14.6	B
Southbound								
L	266	480	0.21	0.55	13.5	B		
T	1031	1863	0.67	0.55	19.8	B	19.3	B

Intersection Delay = 19.3 (sec/veh) Intersection LOS = B

HCS2000: Unsignalized Intersections Release 4.1d

TWO-WAY STOP CONTROL SUMMARY

Analyst: JBY
Agency/Co.: Wells & Associates, LLC
Date Performed: 04/17/03
Analysis Time Period: AM Peak Hour
Intersection: W St and NorthAlley (west)
Jurisdiction: Washington, DC
Units: U. S. Customary
Analysis Year: Existing 2003
Project ID: 2099 Square 235
East/West Street: W St
North/South Street: North Alley (west)
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	5	250	3			
Peak-Hour Factor, PHF	0.90	0.90	0.90			
Hourly Flow Rate, HFR	5	27	3			
Percent Heavy Vehicles	2	--	--		--	--
Median Type/Storage	Raised curb			/ 1		
RT Channelized?						
Lanes	0	1	0			
Configuration		LTR				
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume		0	4	6	0	
Peak Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		0	4	6	0	
Percent Heavy Vehicles		2	2	2	2	
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No	/		
Lanes		1	0	0	1	
Configuration			TR		LT	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LTR				TR	LT		
v (vph)	5				4	6		
C(m) (vph)	1564				727	621		
v/c	0.00				0.01	0.01		
95% queue length	0.01				0.02	0.03		
Control Delay	7.3				10.0	10.9		
LOS	A				A	B		
Approach Delay				10.0			10.9	
Approach LOS				A			B	

HCS2000: Unsignalized Intersections Release 4.1d

TWO-WAY STOP CONTROL SUMMARY

Analyst: JBY
Agency/Co.: Wells & Associates, LLC
Date Performed: 04/17/03
Analysis Time Period: PM Peak Hour
Intersection: W St and North Alley (west)
Jurisdiction: Washington, DC
Units: U. S. Customary
Analysis Year: Existing 2003
Project ID: 2099 Square 235
East/West Street: W St
North/South Street: North Alley (west)
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	2	311	0			
Peak-Hour Factor, PHF	0.90	0.90	0.90			
Hourly Flow Rate, HFR	2	345	0			
Percent Heavy Vehicles	2	--	--		--	--
Median Type/Storage	Raised curb			/ 1		
RT Channelized?						
Lanes	0	1	0			
Configuration		LTR				
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume		0	5	8	0	
Peak Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		0	5	8	0	
Percent Heavy Vehicles		2	0	2	2	
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			/
Lanes		1	0	0	1	
Configuration			TR		LT	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LTR				TR	LT		
v (vph)	2				5	8		
C(m) (vph)	1591				663	584		
v/c	0.00				0.01	0.01		
95% queue length	0.00				0.02	0.04		
Control Delay	7.3				10.5	11.2		
LOS	A				B	B		
Approach Delay				10.5			11.2	
Approach LOS				B			B	

HCS2000: Unsignalized Intersections Release 41d

TWO-WAY STOP CONTROL SUMMARY

Analyst:	SMH
Agency/Co.:	Wells & Associates, LLC
Date Performed:	12/11/03
Analysis Time Period:	AM Peak Hour
Intersection:	W St and North Alley (east)
Jurisdiction:	Washington, DC
Units: U. S. Customary	
Analysis Year:	Existing 2003
Project ID: 2099 Square 235	
East/West Street:	W St
North/South Street:	North Alley (east)
Intersection Orientation: EW	Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	7	250	5			
Peak-Hour Factor, PHF	0.90	0.90	0.90			
Hourly Flow Rate, HFR	7	277	5			
Percent Heavy Vehicles	2	--	--		--	--
Median Type/Storage	Raised curb			/ 1		
RT Channelized?						
Lanes	0	1	0			
Configuration		LTR				
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume		0	11	2	0	
Peak Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		0	12	2	0	
Percent Heavy Vehicles		2	2	2	2	
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No	/		/
Lanes		1	0	0	1	
Configuration			TR		LT	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LTR				TR	LT		
v (vph)	7				12	2		
C(m) (vph)	1407				676	542		
v/c	0.00				0.02	0.00		
95% queue length	0.01				0.05	0.01		
Control Delay	7.6				10.4	11.7		
LOS	A				B	B		
Approach Delay				10.4			11.7	
Approach LOS				B			B	

C-5

HCS2000: Unsignalized Intersections Release 4.1d

TWO-WAY STOP CONTROL SUMMARY

Analyst: SMH
Agency/Co.: Wells & Associates, LLC
Date Performed: 12/11/03
Analysis Time Period: PM Peak Hour
Intersection: W St and North Alley (east)
Jurisdiction: Washington, DC
Units: U. S. Customary
Analysis Year: Existing 2003
Project ID: 2099 Square 235
East/West Street: W St
North/South Street: North Alley (east)
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	13	311	0			
Peak-Hour Factor, PHF	0.90	0.90	0.90			
Hourly Flow Rate, HFR	14	345	0			
Percent Heavy Vehicles	2	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1	0			
Configuration		LTR				
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume		0	7	10	3	
Peak Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		0	7	11	3	
Percent Heavy Vehicles		2	2	2	2	
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			/
Lanes		1	0	0	1	
Configuration		TR		LT		

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LTR				TR	L		
v (vph)	14				7	14		
C(m) (vph)	1385				641	413		
v/c	0.01				0.01	0.03		
95% queue length	0.03				0.03	0.11		
Control Delay	7.6				10.7	14.0		
LOS	A				B	B		
Approach Delay				10.7			14.0	
Approach LOS				B			B	

HCS2000: Signalized Intersections Release 4.1d

Analyst: JBY
Agency: Wells & Associates, LLC
Date: 04/17/03
Period: AM Peak Hour
Project ID: 2099 Square 235
E/W St: W St

Inter.: 13th Stand W St
Area Type: All other areas
Jurisd: Washington, DC
Year : Existing 2003

N/S St: 13th St

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	1	0	0	0	0	0	1	0	1	1	0
LGConfig		LTR						TR		L	T	
Volume	18	177	68					229	19	16	677	
Lane Width		12.0						12.0		12.0	12.0	
RTOR Vol			0						0			

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4		5	6	7	8
EB Left	P				NB Left				
Thru	P				Thru	P			
Right	P				Right	P			
Peds	X				Peds	X			
WB Left					SB Left	P			
Thru					Thru	P			
Right					Right				
Peds	X				Peds	X			
NB Right					EB Right				
SB Right					WB Right				
Green	32.0	0.0	0.0			57.0	0.0	0.0	0.0
Yellow	4.0	0.0				4.0		0.0	
All Red	2.0	0.0				2.0		0.0	

Cycle Length: 101.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
LTR	560	1768	0.52	0.32	31.7	C	31.7	C
Westbound								
Northbound								
TR	1036	1836	0.27	0.56	11.9	B	11.9	B
Southbound								
L	551	977	0.03	0.56	9.9	A		
T	1051	1863	0.72	0.56	20.2	C	20.0+	C

Intersection Delay = 20.9 (sec/veh) Intersection LOS = C

HCS2000: Signalized Intersections Release 4.1d

Analyst: JBY
Agency: Wells & Associates, LLC
Date: 04/17/03
Period: PM Peak Hour
Project ID: 2099 Square 235
E/W St: W St

Inter.: 13th St and W St
Area Type: All other areas
Jurisd: Washington, DC
Year : Existing 2003

N/S St: 13th St

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	1	0	0	0	0	0	1	0	1	1	0
LGConfig		LTR						TR		L	T	
Volume	41	221	66					544	28	31	411	
Lane Width		12.0						12.0		12.0	12.0	
RTOR Vol			0						0			

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	P				NB Left			
Thru	P				Thru	P		
Right	P				Right	P		
Peds	X				Peds	X		
WB Left					SB Left	P		
Thru					Thru	P		
Right					Right			
Peds	X				Peds	X		
NB Right					EB Right			
SB Right					WB Right			
Green	32.0	0.0	0.0		57.0	0.0	0.0	0.0
Yellow	4.0	0.0			4.0		0.0	
All Red	2.0	0.0			2.0		0.0	

Cycle Length: 101.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
LTR	568	1793	0.64	0.32	35.1	D	35.1	D
Westbound								
Northbound								
TR	1043	1849	0.61	0.56	17.2	B	17.2	B
Southbound								
L	344	610	0.10	0.56	10.7	B		
T	1051	1863	0.43	0.56	14.0	B	13.8	B

Intersection Delay = 20.5 (sec/veh) Intersection LOS = C

HCS2000: Signalized Intersections Release 4.1d

Analyst: JBY
Agency: Wells & Associates, LLC
Date: 04/17/03
Period: AM Peak Hour
Project ID: 2099 Square 235
E/W St: V St

Inter.: 14th St and V St
Area Type: All other areas
Jurisd: Washington, DC
Year : Existing 2003

N/S St: 14th St

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	0	1	0	0	2	0	0	2	0
LGConfig				LTR			LT			TR		
Volume				34	50	31	20	343			873	26
Lane Width					12.0			12.0			12.0	
RTOR Vol					0						0	

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left	P		
Thru					Thru	P		
Right					Right			
Peds		X			Peds	X		
WB Left		P			SB Left			
Thru		P			Thru	P		
Right		P			Right	P		
Peds		X			Peds	X		
NB Right					EB Right			
SB Right					WB Right			
Green		30.0	0.0	0.0		58.0	0.0	0.0	0.0
Yellow		4.0	0.0			4.0		0.0	
All Red		2.0	0.0			2.0		0.0	

Cycle Length: 100.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
Westbound								
LTR	517	1724	0.25	0.30	27.6	C	27.6	C
Northbound								
LT	1790	3087	0.23	0.58	10.4	B	10.4	B
Southbound								
TR	2035	3509	0.49	0.58	13.2	B	13.2	B

Intersection Delay = 13.7 (sec/veh) Intersection LOS = B

HCS2000: Signalized Intersections Release 4.1d

Analyst: JBY
Agency: Wells & Associates, LLC
Date: 04/17/03
Period: PM Peak Hour
Project ID: 2099 Square 235
E/W St: V St

Inter.: 14th St and V St
Area Type: All other areas
Jurisd: Washington, DC
Year : Existing 2003

N/S St: 14th St

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	0	1	0	0	2	0	0	2	0
LGConfig					LTR			LT			TR	
Volume				13	53	44	28	724			548	34
Lane Width					12.0			12.0			12.0	
RTOR Vol						0						0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left					NB	Left	P			
	Thru						Thru	P			
	Right						Right				
	Peds		X				Peds	X			
WB	Left		P			SB	Left				
	Thru		P				Thru	P			
	Right		P				Right	P			
	Peds		X				Peds	X			
NB	Right					EB	Right				
SB	Right					WB	Right				
Green			30.0	0.0	0.0			58.0	0.0	0.0	0.0
Yellow			4.0	0.0				4.0		0.0	
All Red			1.0	0.0				2.0		0.0	

Cycle Length: 99.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	LaneGroup Delay	LaneGroup LOS	Approach Delay	Approach LOS
Eastbound								
Westbound								
LTR	521	1720	0.23	0.30	26.9	C	26.9	C
Northbound								
LT	1883	3214	0.44	0.59	12.2	B	12.2	B
Southbound								
TR	2041	3484	0.32	0.59	10.8	B	10.8	B

Intersection Delay = 12.8 (sec/veh) Intersection LOS = B

HCS2000: Signalized Intersections Release 4.1d

Analyst: JBY
Agency: Wells & Associates, LLC
Date: 04/17/03
Period: AM Peak Hour
Project ID: 2099 Square 235
E/W St: V St

Inter.: 13th St and V St
Area Type: All other areas
Jurisd: Washington, DC
Year : Existing 2003

N/S St: 13th St

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	0	1	0	0	1	0	0	1	0
LGConfig					LTR			LT			TR	
Volume				17	101	15	39	559			634	39
Lane Width					12.0			12.0			12.0	
RTOR Vol						0						0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left	P		
Thru					Thru	P		
Right					Right			
Peds		X			Peds	X		
WB Left		P			SB Left			
Thru		P			Thru	P		
Right		P			Right	P		
Peds		X			Peds	X		
NB Right					EB Right			
SB Right					WB Right			
Green		30.0	0.0	0.0		58.0	0.0	0.0	0.0
Yellow		4.0	0.0			4.0		0.0	
All Red		2.0	0.0			2.0		0.0	

Cycle Length: 100.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
Westbound								
LTR	544	1812	0.27	0.30	27.9	C	27.9	C
Northbound								
LT	994	1713	0.67	0.58	18.0	B	18.0	B
Southbound								
TR	1070	1845	0.70	0.58	18.6	B	18.6	B

Intersection Delay = 19.2 (sec/veh) IntersectionLOS = B

HCS2000: Signalized Intersections Release 4.1d

Analyst: JBY
Agency: Wells & Associates, LLC
Date: 04/17/03
Period: PM Peak Hour
Project ID: 2099 Square 235
E/W St: V St

Inter.: 13th St and V St
Area Type: All other areas
Jurisd: Washington, DC
Year : Existing 2003

N/SSt: 13th St

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	0	1	0	0	1	0	0	1	0
LGConfig					LTR			LT			TR	
Volume				14	64	12	36	559			428	32
Lane Width					12.0			12.0			12.0	
RTOR Vol						0						0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left	P		
Thru					Thru	P		
Right					Right			
Peds		X			Peds	X		
WB Left		P			SB Left			
Thru		P			Thru	P		
Right		P			Right	P		
Peds		X			Peds	X		
NB Right					EB Right			
SB Right					WB Right			
Green		30.0	0.0	0.0		58.0	0.0	0.0	0.0
Yellow		4.0	0.0			4.0		0.0	
All Red		2.0	0.0			2.0		0.0	

Cycle Length: 100.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
Westbound								
LTR	543	1811	0.18	0.30	26.7	C	26.7	C
Northbound								
LT	1023	1764	0.65	0.58	17.3	B	17.3	B
Southbound								
TR	1068	1841	0.48	0.58	13.8	B	13.8	B

Intersection Delay = 16.6 (sec/veh) Intersection LOS = B

HCS2000: Unsignalized Intersections Release 4.1d

TWO-WAY STOP CONTROL SUMMARY

Analyst: JBY
Agency/Co.: Wells & Associates, LLC
Date Performed: 04/17/03
Analysis Time Period: AM Peak Hour
Intersection: V St and South Alley (west)
Jurisdiction: Washington, DC
Units: U. S. Customary
Analysis Year: Existing 2003
Project ID: 2099 Square 235
East/West Street: V St
North/South Street: South Alley (west)
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume				0	244	3
Peak-Hour Factor, PHF				0.90	0.90	0.90
Hourly Flow Rate, HFR				0	271	3
Percent Heavy Vehicles		--	--	2	--	--
Median Type/Storage	Raised curb			/ 1		
RT Channelized?						
Lanes				0	1	0
Configuration					LTR	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	0	0				0
Peak Hour Factor, PHF	0.90	0.90				0.90
Hourly Flow Rate, HFR	0	0				0
Percent Heavy Vehicles	2	2				2
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage				/		/
Lanes	0	1			1	
Configuration		LT			R	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LTR	LT					R
v (vph)		0	0					0
C(m) (vph)		1492						701
v/c		0.00						0.00
95% queue length		0.00						0.00
Control Delay		7.4						10.1
LOS		A						B
Approach Delay								
Approach LOS								

HCS2000: Unsignalized Intersections Release 4.1d

TWO-WAY STOP CONTROL SUMMARY

Analyst: JBY
Agency/Co.: Wells & Associates, LLC
Date Performed: 04/17/03
Analysis Time Period: PM Peak Hour
Intersection: V St and South Alley (west)
Jurisdiction: Washington, DC
Units: U. S. Customary
Analysis Year: Existing 2003
Project ID: 2099 Square 235
East/West Street: V St
North/South Street: South Alley (west)
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume				0	149	1
Peak-Hour Factor, PHF				0.90	0.90	0.90
Hourly Flow Rate, HFR				0	165	1
Percent Heavy Vehicles		--	--	2	--	--
Median Type/Storage	Raised curb			/ 1		
RT Channelized?						
Lanes				0	1	0
Configuration					LTR	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	0	0				0
Peak Hour Factor, PHF	0.90	0.90				0.90
Hourly Flow Rate, HFR	0	0				0
Percent Heavy Vehicles	2	2				2
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage				/		/
Lanes	0	1			1	
Configuration		LT			R	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LTR	LT					R
v (vph)		0	0					0
C(m) (vph)		1556						823
v/c		0.00						0.00
95% queue length		0.00						0.00
Control Delay		7.3						9.4
LOS		A						A
Approach Delay								
Approach LOS								

HCS2000: Unsignalized Intersections Release 4.1d

TWO-WAY STOP CONTROL SUMMARY

Analyst: SMH
Agency/Co.: Wells & Associates, LLC
Date Performed: 12/11/03
Analysis Time Period: AM Peak Hour
Intersection: V St and South Alley (east)
Jurisdiction: Washington, DC
Units: U. S. Customary
Analysis Year: Existing 2003
Project ID: 2099 Square 235
East/West Street: V St
North/South Street: South Alley (east)
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume					164	15
Peak-Hour Factor, PHF					0.90	0.90
Hourly Flow Rate, HFR					182	16
Percent Heavy Vehicles		--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes					1	0
Configuration						TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume						6
Peak Hour Factor, PHF						0.90
Hourly Flow Rate, HFR						6
Percent Heavy Vehicles						2
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			/
Lanes						1
Configuration						R

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config								R
v (vph)								6
C(m) (vph)								803
v/c								0.01
95% queue length								0.02
Control Delay								9.5
LOS								A
Approach Delay							9.5	
Approach LOS							A	

HCS2000: Unsignalized Intersections Release 4.1d

TWO-WAY STOP CONTROL SUMMARY

Analyst:	SMH
Agency/Co.:	Wells & Associates, LLC
Date Performed:	12/11/03
Analysis Time Period:	PM Peak Hour
Intersection:	V St and South Alley (east)
Jurisdiction:	Washington, DC
Units: U. S. Customary	
Analysis Year:	Existing 2003
Project ID: 2099 Square 235	
East/West Street:	V St
North/South Street:	South Alley (east)
Intersection Orientation: EW	Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume					121	11
Peak-Hour Factor, PHF					0.90	0.90
Hourly Flow Rate, HFR					134	12
Percent Heavy Vehicles		--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes					1	0
Configuration						TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume						2
Peak Hour Factor, PHF						0.90
Hourly Flow Rate, HFR						2
Percent Heavy Vehicles						2
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			/
Lanes						1
Configuration						R

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config								R
v (vph)								2
C(m) (vph)								483
v/c								0.00
95% queue length								0.01
Control Delay								9.3
LOS								A
Approach Delay							9.3	
Approach LOS							A	

Appendix D

Capacity Analysis Worksheets for Background Condition

HCS2000: Signalized Intersections Release 4.1d

Analyst: JBY
Agency: Wells & Associates, LLC
Date: 04/17/03
Period: AM Peak Hour
Project ID: 2099 Square 235
E/W St: W St

Inter.: 14th St and W St
Area Type: All other areas
Jurisd: Washington, DC
Year : Background 2007

N/S St: 14th St

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	1	0	0	0	0	0	2	0	1	1	0
LGConfig		LTR						TR		L	T	
Volume	30	162	93					425	47	67	949	
Lane Width		12.0						12.0		12.0	12.0	
RTOR Vol			0						0			

Duration 0.25 Area Type All other areas

Signal Operations

Phase Combination	1	2	3	4		5	6	7	8
EB Left	P				NB Left				
Thru	P				Thru	P			
Right	P				Right	P			
Peds	X				Peds	X			
WB Left					SB Left	P			
Thru					Thru	P			
Right					Right				
Peds	X				Peds	X			
NB Right					EB Right				
SB Right					WB Right				
Green	34.0	0.0	0.0			57.0	0.0	0.0	0.0
Yellow	4.0	0.0				4.0		0.0	
All Red	2.0	0.0				2.0		0.0	

Cycle Length: 103.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
LTR	561	1699	0.56	0.33	32.4	C	32.4	C
Westbound								
Northbound								
TR	1924	3477	0.27	0.55	12.4	B	12.4	B
Southbound								
L	443	800	0.17	0.55	12.1	B		
T	1031	1863	1.02	0.55	56.8	E	53.9	D

Intersection Delay = 39.4 (sec/veh) Intersection LOS = D

HCS2000: Signalized Intersections Release 4.1d

Analyst: JBY
Agency: Wells & Associates, LLC
Date: 04/17/03
Period: PM Peak Hour
Project ID: 2099 Square 235
E/W St: W St

Inter.: 14th St and W St
Area Type: All other areas
Jurisd: Washington, DC
Year : Background 2007

N/SSt: 14th St

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	1	0	0	0	0	0	2	0	1	1	0
LGConfig		LTR						TR		L	T	
Volume	44	199	62					760	84	53	659	
Lane Width		12.0						12.0		12.0	12.0	
RTOR Vol			0						0			

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	P				NB Left			
Thru	P				Thru	P		
Right	P				Right	P		
Peds	X				Peds	X		
WB Left					SB Left	P		
Thru					Thru	P		
Right					Right			
Peds	X				Peds	X		
NB Right					EB Right			
SB Right					WB Right			
Green	34.0	0.0	0.0		57.0	0.0	0.0	0.0
Yellow	4.0	0.0			4.0		0.0	
All Red	2.0	0.0			2.0		0.0	

Cycle Length: 103.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
LTR	583	1767	0.58	0.33	32.8	C	32.8	C
Westbound								
Northbound								
TR	1923	3475	0.49	0.55	15.0	B	15.0	B
Southbound								
L	248	449	0.24	0.55	14.1	B		
T	1031	1863	0.71	0.55	21.1	C	20.5	C

Intersection Delay = 20.0 (sec/veh) Intersection LOS = C

HCS2000: Unsignalized Intersections Release 4.1d

TWO-WAY STOP CONTROL SUMMARY

Analyst: JBY
Agency/Co.: Wells & Associates, LLC
Date Performed: 04/17/03
Analysis Time Period: AM Peak Hour
Intersection: W St and NorthAlley (west)
Jurisdiction: Washington, DC
Units: U. S. Customary
Analysis Year: Background 2007
Project ID: 2099 Square 235
East/West Street: W St
North/South Street: North Alley (west)
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	5	260	3			
Peak-Hour Factor, PHF	0.90	0.90	0.90			
Hourly Flow Rate, HFR	5	288	3			
Percent Heavy Vehicles	2	--	--		--	--
Median Type/Storage	Raised curb		/ 1			
RT Channelized?						
Lanes	0	1	0			
Configuration		LTR				
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume		0	4	6	0	
Peak Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		0	4	6	0	
Percent Heavy Vehicles		2	0	2	2	
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			/
Lanes		1	0	0	1	
Configuration			TR	LT		

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LTR				TR	LT		
v (vph)	5				4	6		
C(m) (vph)	1564				722	612		
v/c	0.00				0.01	0.01		
95% queue length	0.01				0.02	0.03		
Control Delay	7.3				10.0+	10.9		
LOS	A				B	B		
Approach Delay				10.0+			10.9	
Approach LOS				B			B	

HCS2000: Unsignalized Intersections Release 4.1d

TWO-WAY STOP CONTROL SUMMARY

Analyst: JBY
Agency/Co.: Wells & Associates, LLC
Date Performed: 04/17/03
Analysis Time Period: PM Peak Hour
Intersection: W St and North Alley (west)
Jurisdiction: Washington, DC
Units: U. S. Customary
Analysis Year: Background 2007
Project ID: 2099 Square 235
East/West Street: W St
North/South Street: North Alley (west)
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	2	324	0			
Peak-Hour Factor, PHF	0.90	0.90	0.90			
Hourly Flow Rate, HFR	2	360	0			
Percent Heavy Vehicles	2	--	--		--	--
Median Type/Storage	Raised curb			/ 1		
RT Channelized?						
Lanes	0	1	0			
Configuration		LTR				
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume		0	5	8	0	
Peak Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		0	5	8	0	
Percent Heavy Vehicles		2	0	2	2	
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			/
Lanes		1	0	0	1	
Configuration			TR		LT	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LTR				TR	LT		
v (vph)	2				5	8		
C(m) (vph)	1591				650	574		
v/c	0.00				0.01	0.01		
95% queue length	0.00				0.02	0.04		
Control Delay	7.3				10.6	11.4		
LOS	A				B	B		
Approach Delay				10.6			11.4	
Approach LOS				B			B	

HCS2000: Unsignalized Intersections Release 4.1

TWO-WAY STOP CONTROL SUMMARY

Analyst: SMH
Agency/Co.: Wells & Associates, LLC
Date Performed: 12/11/03
Analysis Time Period: AM Peak Hour
Intersection: W St and North Alley (east)
Jurisdiction: Washington, DC
Units: U. S. Customary
Analysis Year: Background 2007
Project ID: 2099 Square 235
East/West Street: W St
North/South Street: North Alley (east)
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	7	261	5			
Peak-Hour Factor, PHF	0.90	0.90	0.90			
Hourly Flow Rate, HFR	7	290	5			
Percent Heavy Vehicles	2	--	--		--	--
Median Type/Storage	Raised curb			/ 1		
RT Channelized?						
Lanes	0	1	0			
Configuration		LTR				
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume		0	11	2	0	
Peak Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		0	12	2	0	
Percent Heavy Vehicles		2	2	2	2	
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			/
Lanes		1	0	0	1	
Configuration			TR		LT	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LTR				TR	LT		
v (vph)	7				12	2		
C(m) (vph)	1407				666	535		
v/c	0.00				0.02	0.00		
95% queue length	0.01				0.06	0.01		
Control Delay	7.6				10.5	11.8		
LOS	A				B	B		
Approach Delay				10.5			11.8	
Approach LOS				B			B	

HCS2000: Unsignalized Intersections Release 4.1d

TWO-WAY STOP CONTROL SUMMARY

Analyst:	SMH
Agency/Co.:	Wells & Associates, LLC
Date Performed:	12/11/03
Analysis Time Period:	PM Peak Hour
Intersection:	W St and North Alley (east)
Jurisdiction:	Washington, DC
Units: U. S. Customary	
Analysis Year:	Background 2007
Project ID: 2099 Square 235	
East/West Street:	W St
North/South Street:	North Alley (east)
Intersection Orientation: EW	Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	13	325	0			
Peak-Hour Factor, PHF	0.90	0.90	0.90			
Hourly Flow Rate, HFR	14	361	0			
Percent Heavy Vehicles	2	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1	0			
Configuration		LTR				
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume		0	7	10	3	
Peak Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		0	7	11	3	
Percent Heavy Vehicles		2	2	2	2	
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			/
Lanes		1	0	0	1	
Configuration			TR		LT	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LTR				TR	LT		
v (vph)	14				7	14		
C(m) (vph)	1385				628	404		
v/c	0.01				0.01	0.03		
95% queue length	0.03				0.03	0.11		
Control Delay	7.6				10.8	14.2		
LOS	A				B	B		
Approach Delay				10.8			14.2	
Approach LOS				B			B	

HCS2000: Signalized Intersections Release 4.1d

Analyst: JBY
Agency: Wells & Associates, LLC
Date: 04/17/03
Period: AM Peak Hour
Project ID: 2099 Square 235
E/W St: W St

Inter.: 13th St and W St
Area Type: All other areas
Jurisd: Washington, DC
Year : Background 2007

N/S St: 13th St

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	1	0	0	0	0	0	1	0	1	1	0
LGConfig		LTR						TR		L	T	
Volume	19	184	71					244	20	17	706	
Lane Width		12.0						12.0		12.0	12.0	
RTOR Vol			0						0			

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	P				NB Left			
Thru	P				Thru	P		
Right	P				Right	P		
Peds	X				Peds	X		
WB Left					SB Left	P		
Thru					Thru	P		
Right					Right			
Peds	X				Peds	X		
NB Right					EB Right			
SB Right					WB Right			
Green	32.0	0.0	0.0		57.0	0.0	0.0	0.0
Yellow	4.0	0.0			4.0		0.0	
All Red	2.0	0.0			2.0		0.0	

Cycle Length: 101.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
LTR	562	1775	0.54	0.32	32.2	C	32.2	C
Westbound								
Northbound								
TR	1036	1836	0.28	0.56	12.1	B	12.1	B
Southbound								
L	538	954	0.04	0.56	9.9	A		
T	1051	1863	0.75	0.56	21.4	C	21.1	C

Intersection Delay = 21.6 (sec/veh) Intersection LOS = C

HCS2000: Signalized Intersections Release 4.1d

Analyst: JBY
Agency: Wells & Associates, LLC
Date: 04/17/03
Period: PM Peak Hour
Project ID: 2099 Square 235
E/W St: W St

Inter.: 13th St and W St
Area Type: All other areas
Jurisd: Washington, DC
Year : Background 2007

N/S St: 13th St

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	1	0	0	0	0	0	1	0	1	1	0
LGConfig		LTR						TR		L	T	
Volume	43	230	69					571	29	32	436	
Lane Width		12.0						12.0		12.0	12.0	
RTOR Vol			0						0			

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination		1	2	3	4		5	6	7	8
EB	Left	P				NB	Left			
	Thru	P					Thru	P		
	Right	P					Right	P		
	Peds	X					Peds	X		
WB	Left					SB	Left	P		
	Thru						Thru	P		
	Right						Right			
	Peds	X					Peds	X		
NB	Right					EB	Right			
SB	Right					WB	Right			
Green		32.0	0.0	0.0			57.0	0.0	0.0	0.0
Yellow		4.0	0.0				4.0		0.0	
All Red		2.0	0.0				2.0		0.0	

Cycle Length: 101.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
LTR	568	1792	0.67	0.32	36.1	D	36.1	D
Westbound								
Northbound								
TR	1043	1849	0.64	0.56	18.0	B	18.0	B
Southbound								
L	330	584	0.11	0.56	10.9	B		
T	1051	1863	0.46	0.56	14.4	B	14.2	B

Intersection Delay = 21.1 (sec/veh) Intersection LOS = C

HCS2000: Signalized Intersections Release 4.1d

Analyst: JBY
Agency: Wells & Associates, LLC
Date: 04/17/03
Period: AM Peak Hour
Project ID: 2099 Square 235
E/W St: V St

Inter.: 14th St and V St
Area Type: All other areas
Jurisd: Wahington, DC
Year : Background 2007

N/S St: 14th St

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	0	1	0	0	2	0	0	2	0
LGConfig				LTR			LT			TR		
Volume				39	52	35	21	367		911	27	
Lane Width				12.0			12.0			12.0		
RTOR Vol				0						0		

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left P			
Thru					Thru P			
Right					Right			
Peds	X				Peds X			
WB Left	P				SB Left			
Thru	P				Thru P			
Right	P				Right P			
Peds	X				Peds X			
NB Right					EB Right			
SB Right					WB Right			
Green	30.0	0.0	0.0		58.0	0.0	0.0	0.0
Yellow	4.0	0.0			4.0		0.0	
All Red	2.0	0.0			1.0		0.0	

Cycle Length: 99.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
Westbound								
LTR	521	1719	0.27	0.30	27.4	C	27.4	C
Northbound								
LT	1807	3085	0.24	0.59	10.2	B	10.2	B
Southbound								
TR	2056	3510	0.51	0.59	13.0	B	13.0	B

Intersection Delay = 13.5 (sec/veh) Intersection LOS = B

HCS2000: Signalized Intersections Release 4.1d

Analyst: JBY
Agency: Wells & Associates, LLC
Date: 04/17/03
Period: PM Peak Hour
Project ID: 2099 Square 235
E/W St: V St

Inter.: 14th St and V St
Area Type: All other areas
Jurisd: Washington, DC
Year : Background 2007

N/S St: 14th St

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	0	1	0	0	2	0	0	2	0
LGConfig					LTR			LT			TR	
Volume				16	55	47	29	760			581	35
Lane Width					12.0			12.0			12.0	
RTOR Vol						0						0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left					NB	Left	P			
	Thru						Thru	P			
	Right						Right				
	Peds	X					Peds	X			
WB	Left	P				SB	Left				
	Thru	P					Thru	P			
	Right	P					Right	P			
	Peds	X					Peds	X			
NB	Right					EB	Right				
SB	Right					WB	Right				
Green		30.0	0.0	0.0				58.0	0.0	0.0	0.0
Yellow		4.0	0.0					4.0		0.0	
All Red		2.0	0.0					2.0		0.0	

Cycle Length: 100.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
Westbound								
LTR	515	1718	0.25	0.30	27.7	C	27.7	C
Northbound								
LT	1858	3203	0.47	0.58	13.0	B	13.0	B
Southbound								
TR	2021	3485	0.34	0.58	11.4	B	11.4	B

Intersection Delay = 13.5 (sec/veh) Intersection LOS = B

HCS2000: Signalized Intersections Release 4.1d

Analyst: JBY
Agency: Wells & Associates, LLC
Date: 04/17/03
Period: AM Peak Hour
Project ID: 2099 Square 235
E/W St: V St

Inter.: 13th St and V St
Area Type: All other areas
Jurisd: Washington, DC
Year : Background 2007

N/S St: 13th St

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	0	1	0	0	1	0	0	1	0
LGConfig					LTR			LT			TR	
Volume				18	105	16	41	188			662	41
Lane Width					12.0			12.0			12.0	
RTOR Vol						0						0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left	P		
Thru					Thru	P		
Right					Right			
Peds	X				Peds	X		
WB Left	P				SB Left			
Thru	P				Thru	P		
Right	P				Right	P		
Peds	X				Peds	X		
NB Right					EB Right			
SB Right					WB Right			
Green	30.0	0.0	0.0		58.0	0.0	0.0	0.0
Yellow	4.0	0.0			4.0		0.0	
All Red	2.0	0.0			2.0		0.0	

Cycle Length: 100.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
Westbound								
LTR	543	1811	0.29	0.30	28.1	C	28.1	C
Northbound								
LT	866	1493	0.29	0.58	11.5	B	11.5	B
Southbound								
TR	1070	1845	0.73	0.58	19.7	B	19.7	B

Intersection Delay = 19.1 (sec/veh) Intersecton LOS = B

HCS2000: Signalized Intersections Release 4.1d

Analyst: JBY
Agency: Wells & Associates, LLC
Date: 04/17/03
Period: PM Peak Hour
Project ID: 2099 Square 235
E/W St: V St

Inter.: 13th St and V St
Area Type: All other areas
Jurisd: Washington, DC
Year : Background 2007

N/S St: 13th St

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	0	1	0	0	1	0	0	1	0
LGConfig					LTR			LT			TR	
Volume				15	67	12	37	587			453	33
Lane Width					12.0			12.0			12.0	
RTOR Vol						0						0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left	P		
Thru					Thru	P		
Right					Right			
Peds	X				Peds	X		
WB Left	P				SB Left			
Thru	P				Thru	P		
Right	P				Right	P		
Peds	X				Peds	X		
NB Right					EB Right			
SB Right					WB Right			
Green	30.0	0.0	0.0		58.0	0.0	0.0	0.0
Yellow	4.0	0.0			4.0		0.0	
All Red	2.0	0.0			2.0		0.0	

Cycle Length: 100.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
Westbound								
LTR	544	1812	0.19	0.30	26.8	C	26.8	C
Northbound								
LT	1021	1761	0.68	0.58	18.2	B	18.2	B
Southbound								
TR	1068	1841	0.51	0.58	14.2	B	14.2	B

Intersection Delay = 17.2 (sec/veh) Intersection LOS = B

HCS2000: Unsignalized Intersections Release 4.1d

TWO-WAY STOP CONTROL SUMMARY

Analyst: JBY
Agency/Co.: Wells & Associates, LLC
Date Performed: 04/17/03
Analysis Time Period: AM Peak Hour
Intersection: V St and South Alley (west)
Jurisdiction: Washington, DC
Units: U. S. Customary
Analysis Year: Background 2007
Project ID: 2099 Square 235
East/West Street: V St
North/South Street: South Alley (west)
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume				4	254	3
Peak-Hour Factor, PHF				0.90	0.90	0.90
Hourly Flow Rate, HFR				4	282	3
Percent Heavy Vehicles		--	--	2	--	--
Median Type/Storage	Raised curb			/ 1		
RT Channelized?						
Lanes				0	1	0
Configuration					LTR	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	16	0				0
Peak Hour Factor, PHF	0.90	0.90				0.90
Hourly Flow Rate, HFR	17	0				0
Percent Heavy Vehicles	2	2				2
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			/
Lanes	0	1			1	
Configuration		LT			R	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LTR	LT					R
v (vph)		4	17					0
C(m) (vph)		1492	604					693
v/c		0.00	0.03					0.00
95% queue length		0.01	0.09					0.00
Control Delay		7.4	11.1					10.2
LOS		A	B					B
Approach Delay				11.1				
Approach LOS				B				

HCS2000: Unsignalized Intersections Release 4.1d

TWO-WAY STOP CONTROL SUMMARY

Analyst:	JBY
Agency/Co.:	Wells & Associates, LLC
Date Performed:	04/17/03
Analysis Time Period:	PM Peak Hour
Intersection:	V St and South Alley (west)
Jurisdiction:	Washington, DC
Units: U. S. Customary	
Analysis Year:	Background 2007
Project ID: 2099 Square 235	
East/West Street:	V St
North/South Street:	South Alley (west)
Intersection Orientation: EW	Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume				2	155	1
Peak-Hour Factor, PHF				0.90	0.90	0.90
Hourly Flow Rate, HFR				2	172	1
Percent Heavy Vehicles		--	--	2	--	--
Median Type/Storage	Raised curb			/ 1		
RT Channelized?						
Lanes				0	1	0
Configuration					LTR	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	9	0				0
Peak Hour Factor, PHF	0.90	0.90				0.90
Hourly Flow Rate, HFR	10	0				0
Percent Heavy Vehicles	2	2				2
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			/
Lanes	0	1			1	
Configuration		LT			R	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LTR	LT					R
v (vph)		2	10					0
C(m) (vph)		1556	718					815
v/c		0.00	0.01					0.00
95% queue length		0.00	0.04					0.00
Control Delay		7.3	10.1					9.4
LOS		A	B					A
Approach Delay			10.1					
Approach LOS			B					

HCS2000: Unsignalized Intersections Release 4.1d

TWO-WAY STOP CONTROL SUMMARY

Analyst: SMH
Agency/Co.: Wells & Associates, LLC
Date Performed: 12/11/03
Analysis Time Period: AM Peak Hour
Intersection: V St and South Alley (east)
Jurisdiction: Washington, DC
Units: U. S. Customary
Analysis Year: Background 2007
Project ID: 2099 Square 235
East/West Street: V St
North/South Street: South Alley (east)
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume					172	15
Peak-Hour Factor, PHF					0.90	0.90
Hourly Flow Rate, HFR					191	16
Percent Heavy Vehicles		--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes					1	0
Configuration						TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume						6
Peak Hour Factor, PHF						0.90
Hourly Flow Rate, HFR						6
Percent Heavy Vehicles						2
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			/
Lanes					1	
Configuration					R	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config								R
v (vph)								6
C(m) (vph)								793
v/c								0.01
95% queue length								0.02
Control Delay								9.6
LOS								A
Approach Delay							9.6	
Approach LOS							A	

HCS2000: Unsignalized Intersections Release 4.1d

TWO-WAY STOP CONTROL SUMMARY

Analyst: SMH
Agency/Co.: Wells & Associates, LLC
Date Performed: 12/11/03
Analysis Time Period: PM Peak Hour
Intersection: V St and South Alley (east)
Jurisdiction: Washington, DC
Units: U. S. Customary
Analysis Year: Background 2007
Project ID: 2099 Square 235
East/West Street: V St
North/South Street: South Alley (east)
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume					126	11
Peak-Hour Factor, PHF					0.90	0.90
Hourly Flow Rate, HFR					140	12
Percent Heavy Vehicles		--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes					1	0
Configuration						TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume						2
Peak Hour Factor, PHF						0.90
Hourly Flow Rate, HFR						2
Percent Heavy Vehicles						2
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			/
Lanes						1
Configuration						R

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config								R
v (vph)								2
C(m) (vph)								837
v/c								0.00
95% queue length								0.01
Control Delay								9.3
LOS								A
Approach Delay							9.3	
Approach LOS							A	

Appendix E

ZipCar Information

How does Zipcar work?

It's been likened to magic. It's reliable and easy. Can you use mouse or a phone? Can you handle a subway pass? Then Zipcar's a cinch.

First, you choose and reserve one of our hundreds of cars. You can do that online in about two clicks. (You can also use a phone, if you'd rather. We're easy.)

Then you walk to your car's nearby location.

Next, you use your Zipcard to unlock the car.

Then you drive away and return to the same spot when you're done. See? Simple.



Zipcar is easier to use th machine and twice as fu

Want more details? We can give you those.

Run the Numbers
Use our Savings Calculator to figure out how much less you could be spending on transportation every month!

I Like Zipcar I Need It?
You can actuall yourself by ans simple questio

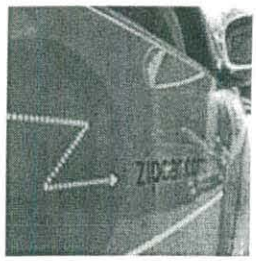
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E1

zipcar

Check Rates: Washington, DC

With Zipcar, you pay only for what you use. Each time you drive, your account is charged automatically, you never have any forms to fill out. And don't forget, these fees include gas, insurance and maintenance!



A sunny day in Washingt

Per Hour

$8.50–$10.50, plus 18¢ per mile after 125 free miles.

Night Owl Special: Between midnight and 6 a.m., the hourly rate is only $2!

Per Day (this is the most you can pay in a 24 hour reservation)

$85–$100, plus 18¢ per mile after 125 free miles. Our daily fees cha seasonally to balance demand and availability.

Enter your zip code to find the precise rates on cars near you!

FIND CARS

Save up to 40% on selected cars on certain days!

The Simple Membership Plan

When you join, your credit card is billed a nonrefundable $20, giving membership privileges for one year. Drive as much or as little as you just pay-as-you-go. You'll be charged the standard rates each month on how much driving you did. No price-shopping, no paper work, no minimum: just wheels when you want them.

Follow one of these links if you want to know more about:

- Two drivers in one household
- Organizational memberships
- Trial offer

Win a free Zipcard!
Haven't signed up yet? Enter your location for a chance to win a free Zipcar membership. We'll choose a new winner at random every month.

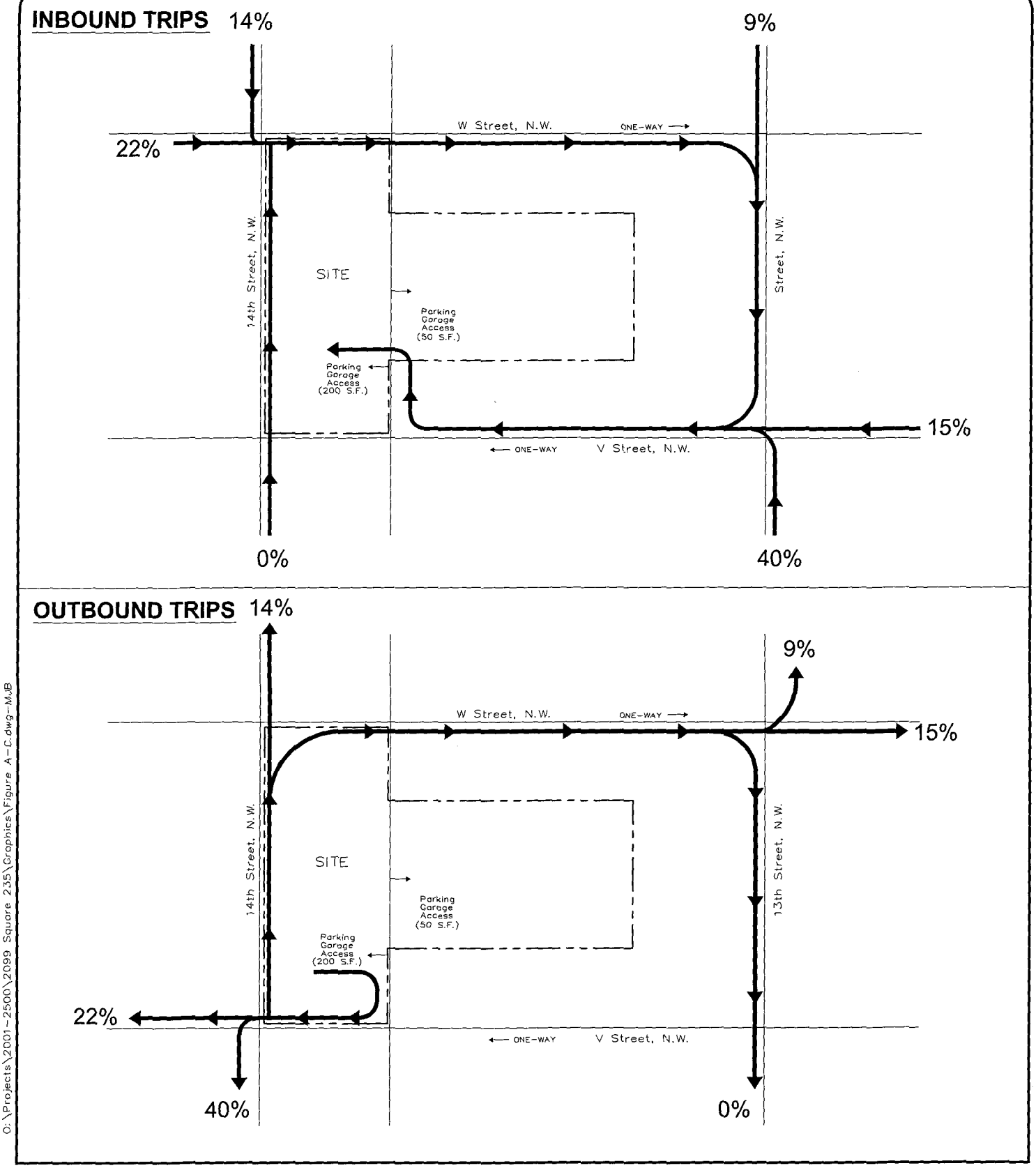
Run the Nun
Use our Saving to figure out hc you could be sp transportation

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E2

Appendix F

Site Trip Distribution



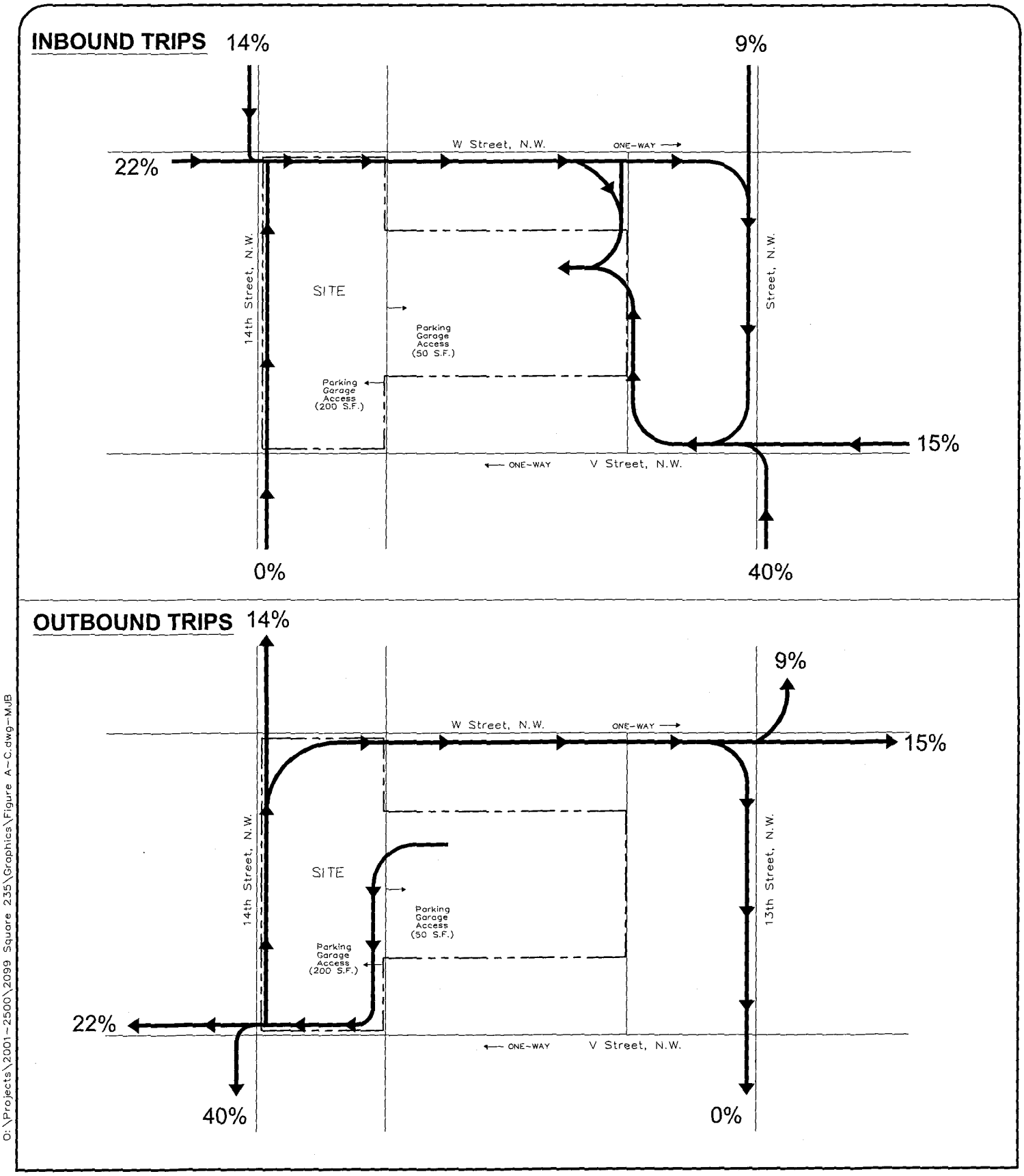
O:\Projects\2001-2500\2099 Square 235\Graphics\Figure A-C.dwg-M.JB

Figure A
Retail and Main Residential Building
Site Trip Distributions

North
Schematic

Square 235
Washington, D.C.

WELLS & ASSOCIATES, LLC.
TRAFFIC, TRANSPORTATION, and PARKING CONSULTANTS



O:\Projects\2001-2500\2099 Square 235\Graphics\Figure A-C.dwg-MJB

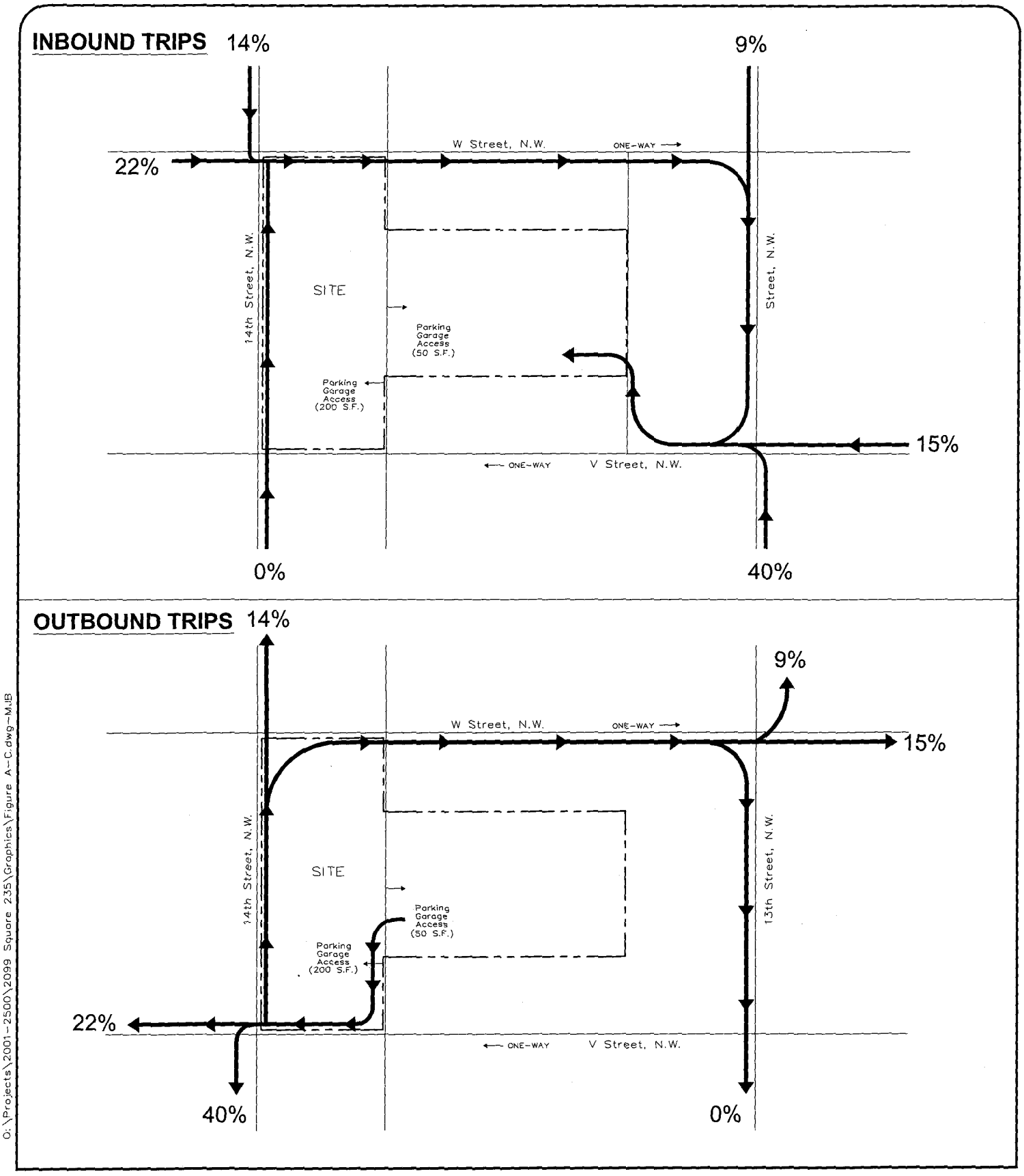
Figure B

North Warehouse Site Trip Distributions

North Schematic

Square 235
Washington, D.C.

WELLS & ASSOCIATES, LLC.
TRAFFIC, TRANSPORTATION, and PARKING CONSULTANTS



O:\Projects\2001-2500\2099 Square 235\Graphics\Figure A-C.dwg-MJB

Figure C

South Warehouse Site Trip Distributions

North
Schematic

Square 235
Washington, D.C.

WELLS & ASSOCIATES, LLC.
TRAFFIC, TRANSPORTATION, and PARKING CONSULTANTS

Appendix G

Capacity Analysis Worksheets for Total Future Conditions

HCS2000: Signalized Intersections Release 4.1d

Analyst: JBY
Agency: Wells & Associates, LLC
Date: 04/17/03
Period: AM Peak Hour
Project ID: 2099 Square 235
E/W St: W St

Inter.: 14th St and W St
Area Type: All other areas
Jurisd: Washington, DC
Year : Total Future 2007

N/S St: 14th St

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	1	0	0	0	0	0	2	0	1	1	0
LGConfig		LTR						TR		L	T	
Volume	30	172	93					434	63	73	949	
Lane Width		12.0						12.0		12.0	12.0	
RTOR Vol			0						0			

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	P				NB Left			
Thru	P				Thru	P		
Right	P				Right	P		
Peds	X				Peds	X		
WB Left					SB Left	P		
Thru					Thru	P		
Right					Right			
Peds	X				Peds	X		
NB Right					EB Right			
SB Right					WB Right			
Green	34.0	0.0	0.0		57.0	0.0	0.0	0.0
Yellow	4.0	0.0			4.0		0.0	
All Red	2.0	0.0			2.0		0.0	

Cycle Length: 103.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
LTR	562	1704	0.58	0.33	33.0	C	33.0	C
Westbound								
Northbound								
TR	1915	3460	0.29	0.55	12.6	B	12.6	B
Southbound								
L	427	772	0.19	0.55	12.5	B		
T	1031	1863	1.02	0.55	56.8	E	53.6	D

Intersection Delay = 39.0 (sec/veh) Intersection LOS = D

HCS2000: Signalized Intersections Release 4.1d

Analyst: JBY
Agency: Wells & Associates, LLC
Date: 04/17/03
Period: PM Peak Hour
Project ID: 2099 Square 235
E/W St: W St

Inter.: 14th St and W St
Area Type: All other areas
Jurisd: Washington, DC
Year : Total Future 2007

N/S St: 14th St

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	1	0	0	0	0	0	2	0	1	1	0
LGConfig		LTR						TR		L	T	
Volume	44	227	62					775	110	71	659	
Lane Width		12.0						12.0		12.0	12.0	
RTOR Vol			0						0			

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4		5	6	7	8
EB Left	P				NB Left				
Thru	P				Thru	P			
Right	P				Right	P			
Peds	X				Peds	X			
WB Left					SB Left	P			
Thru					Thru	P			
Right					Right				
Peds	X				Peds	X			
NB Right					EB Right				
SB Right					WB Right				
Green	34.0	0.0	0.0			57.0	0.0	0.0	0.0
Yellow	4.0	0.0				4.0		0.0	
All Red	2.0	0.0				2.0		0.0	

Cycle Length: 103.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
LTR	586	1775	0.63	0.33	34.3	C	34.3	C
Westbound								
Northbound								
TR	1914	3458	0.51	0.55	15.3	B	15.3	B
Southbound								
L	231	418	0.34	0.55	16.7	B		
T	1031	1863	0.71	0.55	21.1	C	20.6	C

Intersection Delay = 20.6 (sec/veh) Intersection LOS = C

HCS2000: Unsignalized Intersections Release 4.1d

TWO-WAY STOP CONTROL SUMMARY

Analyst:	JBY
Agency/Co.:	Wells & Associates, LLC
Date Performed:	04/17/03
Analysis Time Period:	AM Peak Hour
Intersection:	W St and North Alley (west)
Jurisdiction:	Washington, DC
Units: U. S. Customary	
Analysis Year:	Total Future 2007
Project ID: 2099 Square 235	
East/West Street:	W St
North/South Street:	North Alley (west)
Intersection Orientation: EW	Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	5	292	3			
Peak-Hour Factor, PHF	0.90	0.90	0.90			
Hourly Flow Rate, HFR	5	324	3			
Percent Heavy Vehicles	2	--	--		--	--
Median Type/Storage	Raised curb			/ 1		
RT Channelized?						
Lanes	0	1	0			
Configuration		LTR				
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume		0	4	6	0	
Peak Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		0	4	6	0	
Percent Heavy Vehicles		2	0	2	2	
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No	/		/
Lanes		1	0	0	1	
Configuration			TR		LT	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LTR				TR	LT		
v (vph)	5				4	6		
C(m) (vph)	1564				690	585		
v/c	0.00				0.01	0.01		
95% queue length	0.01				0.02	0.03		
Control Delay	7.3				10.2	11.2		
LOS	A				B	B		
Approach Delay				10.2			11.2	
Approach LOS				B			B	

HCS2000: Unsignalized Intersections Release 4.1d

TWO-WAY STOP CONTROL SUMMARY

Analyst: JBY
Agency/Co.: Wells & Associates, LLC
Date Performed: 04/17/03
Analysis Time Period: PM Peak Hour
Intersection: W St and North Alley (west)
Jurisdiction: Washington, DC
Units: U. S. Customary
Analysis Year: Total Future 2007
Project ID: 2099 Square 235
East/West Street: W St
North/South Street: North Alley (west)
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	2	395	0			
Peak-Hour Factor, PHF	0.90	0.90	0.90			
Hourly Flow Rate, HFR	2	438	0			
Percent Heavy Vehicles	2	--	--		--	--
Median Type/Storage	Raised curb			/ 1		
RT Channelized?						
Lanes	0	1	0			
Configuration		LTR				
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume		0	5	8	0	
Peak Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		0	5	8	0	
Percent Heavy Vehicles		2	0	2	2	
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No	/		/
Lanes		1	0	0	1	
Configuration			TR		LT	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LTR				TR	LT		
v (vph)	2				5	8		
C(m) (vph)	1591				588	520		
v/c	0.00				0.01	0.02		
95% queue length	0.00				0.03	0.05		
Control Delay	7.3				11.2	12.0		
LOS	A				B	B		
Approach Delay				11.2			12.0	
Approach LOS				B			B	

HCS2000: Unsignalized Intersections Release 4.1d

TWO-WAY STOP CONTROL SUMMARY

Analyst:	SMH
Agency/Co.:	Wells & Associates, LLC
Date Performed:	12/11/03
Analysis Time Period:	AM Peak Hour
Intersection:	W St and North Alley (east)
Jurisdiction:	Washington, DC
Units: U. S. Customary	
Analysis Year:	Total Future 2007
Project ID: 2099 Square 235	
East/West Street:	W St
North/South Street:	North Alley (east)
Intersection Orientation: EW	Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	7	290	5			
Peak-Hour Factor, PHF	0.90	0.90	0.90			
Hourly Flow Rate, HFR	7	322	5			
Percent Heavy Vehicles	2	--	--		--	--
Median Type/Storage	Raised curb			/ 1		
RT Channelized?						
Lanes	0	1	0			
Configuration		LTR				
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume		0	11	2	0	
Peak Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		0	12	2	0	
Percent Heavy Vehicles		2	2	2	2	
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No	/		/
Lanes		1	0	0	1	
Configuration			TR		LT	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LTR				TR	LT		
v (vph)	7				12	2		
C(m) (vph)	1407				639	514		
v/c	0.00				0.02	0.00		
95% queue length	0.01				0.06	0.01		
Control Delay	7.6				10.7	12.0		
LOS	A				B	B		
Approach Delay				10.7			12.0	
Approach LOS				B			B	

HCS2000: Unsignalized Intersections Release 4.1d

TWO-WAY STOP CONTROL SUMMARY

Analyst:	SMH
Agency/Co.:	Wells & Associates, LLC
Date Performed:	12/11/03
Analysis Time Period:	PM Peak Hour
Intersection:	W St and North Alley (east)
Jurisdiction:	Washington, DC
Units: U. S. Customary	
Analysis Year:	Total Future 2007
Project ID: 2099 Square 235	
East/West Street:	W St
North/South Street:	North Alley (east)
Intersection Orientation: EW	Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	13	390	4			
Peak-Hour Factor, PHF	0.90	0.90	0.90			
Hourly Flow Rate, HFR	14	433	4			
Percent Heavy Vehicles	2	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1	0			
Configuration		LTR				
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume		0	7	10	3	
Peak Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		0	7	11	3	
Percent Heavy Vehicles		2	2	2	2	
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			/
Lanes		1	0	0	1	
Configuration			TR		LT	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LTR				TR	LT		
v (vph)	14				7	14		
C(m) (vph)	1385				570	361		
v/c	0.01				0.01	0.04		
95% queue length	0.03				0.04	0.12		
Control Delay	7.6				11.4	15.4		
LOS	A				B	C		
Approach Delay				11.4			15.4	
Approach LOS				B			C	

HCS2000: Signalized Intersections Release 4.1d

Analyst: JBY
Agency: Wells & Associates, LLC
Date: 04/17/03
Period: AM Peak Hour
Project ID: 2099 Square 235
E/W St: W St

Inter.: 13th St and W St
Area Type: All other areas
Jurisd: Washington, DC
Year : Total Future 2007

N/S St: 13th St

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	1	0	0	0	0	0	1	0	1	1	0
LGConfig		LTR						TR		L	T	
Volume	25	194	88					244	20	17	710	
Lane Width		12.0						12.0		12.0	12.0	
RTOR Vol			0						0			

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4		5	6	7	8
EB Left	P				NB Left				
Thru	P				Thru	P			
Right	P				Right	P			
Peds	X				Peds	X			
WB Left					SB Left	P			
Thru					Thru	P			
Right					Right				
Peds	X				Peds	X			
NB Right					EB Right				
SB Right					WB Right				
Green	32.0	0.0	0.0			57.0	0.0	0.0	0.0
Yellow	4.0	0.0				4.0		0.0	
All Red	2.0	0.0				2.0		0.0	

Cycle Length: 101.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
LTR	559	1765	0.61	0.32	34.2	C	34.2	C
Westbound								
Northbound								
TR	1036	1836	0.28	0.56	12.1	B	12.1	B
Southbound								
L	538	954	0.04	0.56	9.9	A		
T	1051	1863	0.75	0.56	21.6	C	21.3	C

Intersection Delay = 22.5 (sec/veh) Intersection LOS = C

HCS2000: Signalized Intersections Release 4.1d

Analyst: JBY
Agency: Wells & Associates, LLC
Date: 04/17/03
Period: PM Peak Hour
Project ID: 2099 Square 235
E/W St: W St

Inter.: 13th St and W St
Area Type: All other areas
Jurisd: Washington, DC
Year : Total Future 2007

N/S St: 13th St

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	1	0	0	0	0	0	1	0	1	1	0
LGConfig		LTR						TR		L	T	
Volume	52	246	114					571	29	32	447	
Lane Width		12.0						12.0		12.0	12.0	
RTOR Vol			0						0			

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4		5	6	7	8
EB Left	P				NB Left				
Thru	P				Thru	P			
Right	P				Right	P			
Peds	X				Peds	X			
WB Left					SB Left	P			
Thru					Thru	P			
Right					Right				
Peds	X				Peds	X			
NB Right					EB Right				
SB Right					WB Right				
Green	32.0	0.0	0.0			57.0	0.0	0.0	0.0
Yellow	4.0	0.0				4.0		0.0	
All Red	1.0	0.0				1.0		0.0	

Cycle Length: 99.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
LTR	573	1772	0.80	0.32	41.7	D	41.7	D
Westbound								
Northbound								
TR	1065	1849	0.63	0.58	16.7	B	16.7	B
Southbound								
L	335	581	0.11	0.58	10.1	B		
T	1073	1863	0.46	0.58	13.6	B	13.4	B

Intersection Delay = 22.5 (sec/veh) Intersection LOS = C

HCS2000: Signalized Intersections Release 4.1d

Analyst: JBY
Agency: Wells & Associates, LLC
Date: 04/17/03
Period: AM Peak Hour
Project ID: 2099 Square 235
E/W St: V St

Inter.: 14th St and V St
Area Type: All other areas
Jurisd: Washington, DC
Year : Total Future 2007

N/S St: 14th St

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	0	1	0	0	2	0	0	2	0
LGConfig					LTR			LT			TR	
Volume				65	67	59	21	367			911	27
Lane Width					12.0			12.0			12.0	
RTOR Vol						0						0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4		5	6	7	8
EB Left					NB Left	P			
Thru					Thru	P			
Right					Right				
Peds	X				Peds	X			
WB Left	P				SB Left				
Thru	P				Thru	P			
Right	P				Right	P			
Peds	X				Peds	X			
NB Right					EB Right				
SB Right					WB Right				
Green	30.0	0.0	0.0			58.0	0.0	0.0	0.0
Yellow	4.0	0.0				4.0		0.0	
All Red	2.0	0.0				2.0		0.0	

Cycle Length: 100.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
Westbound								
LTR	511	1703	0.41	0.30	30.5	C	30.5	C
Northbound								
LT	1782	3072	0.24	0.58	10.6	B	10.6	B
Southbound								
TR	2036	3510	0.51	0.58	13.5	B	13.5	B

Intersection Delay = 14.9 (sec/veh) Intersection LOS = B

HCS2000: Signalized Intersections Release 4.1d

Analyst: JBY
Agency: Wells & Associates, LLC
Date: 04/17/03
Period: PM Peak Hour
Project ID: 2099 Square 235
E/W St: V St

Inter.: 14th St and V St
Area Type: All other areas
Jurisd: Washington, DC
Year : Total Future 2007

N/S St: 14th St

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	0	1	0	0	2	0	0	2	0
LGConfig					LTR			LT			TR	
Volume				59	78	88	29	760			581	35
Lane Width					12.0			12.0			12.0	
RTOR Vol						0						0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4		5	6	7	8
EB Left					NB Left	P			
Thru					Thru	P			
Right					Right				
Peds	X				Peds	X			
WB Left	P				SB Left				
Thru	P				Thru	P			
Right	P				Right	P			
Peds	X				Peds	X			
NB Right					EB Right				
SB Right					WB Right				
Green	30.0	0.0	0.0			58.0	0.0	0.0	0.0
Yellow	4.0	0.0				4.0		0.0	
All Red	2.0	0.0				2.0		0.0	

Cycle Length: 100.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
Westbound								
LTR	510	1701	0.49	0.30	32.1	C	32.1	C
Northbound								
LT	1858	3203	0.47	0.58	13.0	B	13.0	B
Southbound								
TR	2021	3485	0.34	0.58	11.4	B	11.4	B

Intersection Delay = 15.1 (sec/veh) Intersection LOS = B

HCS2000: Signalized Intersections Release 4.1d

Analyst: JBY
Agency: Wells & Associates, LLC
Date: 04/17/03
Period: AM Peak Hour
Project ID: 2099 Square 235
E/W St: V St

Inter.: 13th St and V St
Area Type: All other areas
Jurisd: Washington, DC
Year : Total Future 2007

N/S St: 13th St

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	0	1	0	0	1	0	0	1	0
LGConfig					LTR			LT			TR	
Volume				18	112	16	59	188			662	62
Lane Width					12.0			12.0			12.0	
RTOR Vol						0						0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4		5	6	7	8
EB Left					NB Left	P			
Thru					Thru	P			
Right					Right				
Peds		X			Peds	X			
WB Left		P			SB Left				
Thru		P			Thru	P			
Right		P			Right	P			
Peds		X			Peds	X			
NB Right					EB Right				
SB Right					WB Right				
Green		30.0	0.0	0.0		58.0	0.0	0.0	0.0
Yellow		4.0	0.0			4.0		0.0	
All Red		2.0	0.0			2.0		0.0	

Cycle Length: 100.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
Westbound								
LTR	544	1814	0.30	0.30	28.3	C	28.3	C
Northbound								
LT	726	1252	0.38	0.58	12.8	B	12.8	B
Southbound								
TR	1065	1836	0.76	0.58	20.7	C	20.7	C

Intersection Delay = 20.0- (sec/veh) Intersection LOS = B

HCS2000: Signalized Intersections Release 4.1d

Analyst: JBY
Agency: Wells & Associates, LLC
Date: 04/17/03
Period: PM Peak Hour
Project ID: 2099 Square 235
E/W St: V St

Inter.: 13th St and V St
Area Type: All other areas
Jurisd: Washington, DC
Year : Total Future 2007

N/S St: 13th St

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	0	1	0	0	1	0	0	1	0
LGConfig					LTR			LT			TR	
Volume				15	86	12	87	587			453	90
Lane Width					12.0			12.0			12.0	
RTOR Vol						0						0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left	P		
Thru					Thru	P		
Right					Right			
Peds	X				Peds	X		
WB Left	P				SB Left			
Thru	P				Thru	P		
Right	P				Right	P		
Peds	X				Peds	X		
NB Right					EB Right			
SB Right					WB Right			
Green	30.0	0.0	0.0			58.0	0.0	0.0	0.0
Yellow	4.0	0.0				4.0		0.0	
All Red	2.0	0.0				2.0		0.0	

Cycle Length: 100.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
Westbound								
LTR	546	1821	0.23	0.30	27.3	C	27.3	C
Northbound								
LT	836	1441	0.90	0.58	32.6	C	32.6	C
Southbound								
TR	1050	1811	0.57	0.58	15.5	B	15.5	B

Intersection Delay = 25.2 (sec/veh) Intersection LOS = C

HCS2000: Unsignalized Intersections Release 4.1d

TWO-WAY STOP CONTROL SUMMARY

Analyst: JBY
Agency/Co.: Wells & Associates, LLC
Date Performed: 04/17/03
Analysis Time Period: AM Peak Hour
Intersection: V St and South Alley (west)
Jurisdiction: Washington, DC
Units: U. S. Customary
Analysis Year: Total Future 2007
Project ID: 2099 Square 235
East/West Street: V St
North/South Street: South Alley (west)
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume				4	254	40
Peak-Hour Factor, PHF				0.90	0.90	0.90
Hourly Flow Rate, HFR				4	282	44
Percent Heavy Vehicles		--	--	2	--	--
Median Type/Storage	Raised curb			/ 1		
RT Channelized?						
Lanes				0	1	0
Configuration					LTR	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	16	0				66
Peak Hour Factor, PHF	0.90	0.90				0.90
Hourly Flow Rate, HFR	17	0				73
Percent Heavy Vehicles	2	2				2
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			/
Lanes	0	1			1	
Configuration		LT			R	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LTR	LT					R
v (vph)		4	17					73
C(m) (vph)		1492	509					674
v/c		0.00	0.03					0.11
95% queue length		0.01	0.10					0.36
Control Delay		7.4	12.3					11.0
LOS		A	B					B
Approach Delay			12.3				11.0	
Approach LOS			B				B	

HCS2000: Unsignalized Intersections Release 4.1d

TWO-WAY STOP CONTROL SUMMARY

Analyst: JBY
Agency/Co.: Wells & Associates, LLC
Date Performed: 04/17/03
Analysis Time Period: PM Peak Hour
Intersection: V St and South Alley (west)
Jurisdiction: Washington, DC
Units: U. S. Customary
Analysis Year: Total Future 2007
Project ID: 2099 Square 235
East/West Street: V St
North/South Street: South Alley (west)
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume				2	155	126
Peak-Hour Factor, PHF				0.90	0.90	0.90
Hourly Flow Rate, HFR				2	172	140
Percent Heavy Vehicles		--	--	2	--	--
Median Type/Storage	Raised curb			/ 1		
RT Channelized?						
Lanes				0	1	0
Configuration					LTR	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	9	0				107
Peak Hour Factor, PHF	0.90	0.90				0.90
Hourly Flow Rate, HFR	10	0				118
Percent Heavy Vehicles	2	2				2
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			/
Lanes	0	1			1	
Configuration		LT			R	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LTR	LT					R
v (vph)		2	10					118
C(m) (vph)		1556	523					746
v/c		0.00	0.02					0.16
95% queue length		0.00	0.06					0.56
Control Delay		7.3	12.0					10.7
LOS		A	B					B
Approach Delay				12.0			10.7	
Approach LOS				B			B	

HCS2000: Unsignalized Intersections Release 4.1d

TWO-WAY STOP CONTROL SUMMARY

Analyst:	SMH
Agency/Co.:	Wells & Associates, LLC
Date Performed:	12/11/03
Analysis Time Period:	AM Peak Hour
Intersection:	V St and South Alley (east)
Jurisdiction:	Washington, DC
Units: U. S. Customary	
Analysis Year:	Total Future 2007
Project ID:	2099 Square 235
East/West Street:	V St
North/South Street:	South Alley (east)
Intersection Orientation: EW	Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume					207	17
Peak-Hour Factor, PHF					0.90	0.90
Hourly Flow Rate, HFR					230	18
Percent Heavy Vehicles		--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes					1	0
Configuration						TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume						1
Peak Hour Factor, PHF						0.90
Hourly Flow Rate, HFR						1
Percent Heavy Vehicles						2
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			/
Lanes					1	
Configuration					R	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config								R
v (vph)								1
C(m) (vph)								754
v/c								0.00
95% queue length								0.00
Control Delay								9.8
LOS								A
Approach Delay							9.8	
Approach LOS							A	

HCS2000: Unsignalized Intersections Release 4.1d

TWO-WAY STOP CONTROL SUMMARY

Analyst:	SMH
Agency/Co.:	Wells & Associates, LLC
Date Performed:	12/11/03
Analysis Time Period:	PM Peak Hour
Intersection:	V St and South Alley (east)
Jurisdiction:	Washington, DC
Units: U. S. Customary	
Analysis Year:	Total Future 2007
Project ID: 2099 Square 235	
East/West Street:	V St
North/South Street:	South Alley (east)
Intersection Orientation: EW	Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume					241	17
Peak-Hour Factor, PHF					0.90	0.90
Hourly Flow Rate, HFR					267	18
Percent Heavy Vehicles		--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes					1	0
Configuration						TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume						1
Peak Hour Factor, PHF						0.90
Hourly Flow Rate, HFR						1
Percent Heavy Vehicles						2
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			/
Lanes					1	
Configuration					R	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config								R
v (vph)								1
C(m) (vph)								708
v/c								0.00
95% queue length								0.00
Control Delay								10.1
LOS								B
Approach Delay							10.1	
Approach LOS							B	

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