WELLS + ASSOCIATES

100 V STREET SW

COMPREHENSIVE TRANSPORTATION REVIEW

February 2018

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INTRODUCTION

OVERVIEW

This report presents a Comprehensive Transportation Review (CTR) conducted in conjunction with the proposal by SW Land Investors, LLC (herein referred to as the Applicant) to redevelop the existing property, which currently is occupied by a 646-space surface parking lot situated on Squares 0609 and 0611 located at Buzzard Point in Southwest Washington, DC. The site currently is zoned CG-4 and generally is bounded by 1st Street SW to the east, 2nd Street SW to the west, T Street SW to the north, and the V Street SW to the south. The site location is shown on Figure 1.

The Applicant proposes to redevelop the site with a mixed-use project, which potentially would include approximately 1,563 apartment dwelling units, 452 condominium dwelling units, 250,580 SF of office space, a 201-key hotel, 41,221 SF of retail space, a 45,794 SF elementary school, and 39,943 SF for DC Central Kitchen (a food preparation and education space). The project is anticipated to include up to ten buildings with a single, shared below grade parking and loading structure. Access to the parking will be provided via three new curb cuts: one on 1st Street, one on 2nd Street, and one on T Street. Access to the below-grade loading facility will be provided via a new curb cut on 2nd Street and has been designed so that trucks can enter and exit the site front-first via 2nd Street. Five curb cuts that serve the existing parking lot will be abandoned: two on 2nd Street and three on 1st Street. Full size plan excerpts are included in Appendix A.

It should be noted that the project is still in the conceptual master planning phase. As such, the mix of uses indicated may change as plans are further developed for each of the buildings in the project. If significant changes to the program occur, it is anticipated that the traffic study would be updated during the Large Tract Review process.

The purpose of this report is to:

- Evaluate existing traffic operational and safety conditions,
- Evaluate future traffic conditions without the proposed development,
- Evaluate future traffic conditions with the proposed development,
- Identify existing mode choice alternatives,
- Identify any traffic operational impacts associated with the proposed development,
- Evaluate the appropriateness of the proposed parking,
- Evaluate effectiveness of the proposed loading facilities, and
- Recommend transportation improvements (including roadway, operational, and demand management strategies) to mitigate the impact of the development and promote the safe and efficient flow of vehicular and pedestrian traffic associated with the proposed development.

STUDY SCOPE

This study was undertaken to assess the impacts of the proposed development on the surrounding roadway network. The scope of the study and proposed methodologies were approved by the District Department of Transportation (DDOT) prior to beginning the study. The agreed upon scoping document is included in Appendix B.
The study area was selected based on those roadway segments that potentially could be impacted by the proposed development. The following intersections were identified for detailed analysis and agreed to by DDOT:

- 2nd Street/P Street,
- 2nd Street/Q Street,
- 2nd Street/R Street,
- 2nd Street/T Street,
- 2nd Street/V Street,
- 1st Street/V Street,
- 1st Street/T Street, and
- 1st Street/R Street/Potomac Avenue.

TRANSPORTATION FACILITIES

ROADWAY NETWORK

Existing Conditions

General details regarding the surrounding roadway segments, including functional classification, average daily traffic volume (ADT), and speed limit are summarized in Table 1. All roadways in the study area operate as two-way streets, with two exceptions. East of 1st Street, V Street operates as a one-way eastbound and north of V Street, 1st Street operates as one-way northbound. At the time traffic counts were conducted, 2nd Street operated as a southbound one-way street, but has since been converted to two-ways.

Table 1
Existing Conditions by Roadway Segment Details

Roadway	Functional Classification	Average Daily Traffic (vehicles per day)*	Speed Limit (miles per hour)
2nd Street	Collector	300	25
1st Street	Local	3,900	25
P Street	Minor Arterial	7,900	25
Q Street	Local	N/A	25†
R Street	Local	N/A	25†
T Street	Local	N/A	25†
V Street	Collector/Local‡	400	25†
Potomac Avenue	Collector	6,100	25

* The ADT volume is based on DDOT historical traffic volume data collected in 2015, which are the most recent data available.
† Speed limit unposted in the study area; assumed to be 25 mph.
‡ The functional classification of V Street is collector between 2nd Street and 1st Street, and local between 1st Street and Half Street.

Future Conditions

A number of roadway improvements are proposed in the Buzzard Point neighborhood as a result of the construction of the new soccer stadium, the proposed South Capitol Street Corridor Improvement Project, and improvements proposed in conjunction with approved developments in the area.

As requested by DDOT, the following improvements from the Buzzard Point Vision Framework and Implementation Plan are anticipated to be complete prior to build out of the 100 V Street project:

- Conversion of 2nd Street from one-way to two-ways,
- Conversion of 1st Street from one-way to two-ways and potential widening to accommodate parking and bike lanes,
- Closure of R Street between Half and 1st Streets,
- Conversion of Potomac Avenue from two-ways to one-way westbound between the Circle and Half Street,
- Conversion of R Street from two-ways to one-way eastbound between Half Street and South Capitol Street,
- Conversion of Q Street from two-ways to one-way westbound between Half Street and South Capitol Street,
- A vehicular connection for 1st Street between Potomac Ave and T Street which will operate as two-way street with northbound right out from 1st Street to Potomac Avenue,

right in from R Street to 1st Street, and left in from Potomac Avenue to 1st Street with some traffic restrictions on days when soccer games are scheduled, and

- Completion of South Capitol Street Circle.

Likewise, the following improvements associated with approved projects in the area are anticipated to be complete prior to completion of the 100 V Street project:

- Installation of appropriate signing and pavement markings for Water Street between Half Street and S Street,
- Installation of curb extensions at the Water Street/T Street intersection to ensure roadway widths on each side match,
- Reconstruction and realignment of V Street between 1st Street and Half Street to provide two 10-foot travel lanes and an eight-foot parking lane on either side of the roadway, and to re-center the roadway within the right-of-way,
- Reconstruction of 1st Street south of V Street to provide two 10-foot travel lanes and an eight-foot parking lane on either side of the roadway,
- Reconstruction of V Street in between 1st Street and 2nd Street to provide two 10-foot travel lanes and an eight-foot parking lane on either side of the roadway,
- Reconstruction of 2nd Street south of V Street to provide two 10-foot travel lanes in each direction, an eight-foot parking lane on east side of the roadway, and an 11-foot cycle track (two-way) on the west side of the roadway,
- Restriping along the eastbound approach at P Street/2nd Street to accommodate a separate eastbound right turn with a storage of 150 feet along with appropriate signage.

The above improvements were all considered to be completed in the traffic analysis of the future 100 V Street buildout.

MULTI-MODAL TRANSPORTATION FACILITIES

Existing Public Transportation Facilities and Services

Public transportation facilities in the vicinity of the site are limited given the fact that the Buzzard Point area largely is undeveloped. As the Buzzard Point area redevelops, beginning with the construction of the new DC United Soccer Stadium and continuing with the recent approvals for projects at 1900 Half Street, 88 V Street, and 2100 2nd Street, along with the subject development at 100 V Street, public transportation services are expected to be extended to the area. In fact, several property owners in Buzzard Point and the Capitol Riverfront Business Improvement District (BID) have met with the Washington Metropolitan Area Transit Authority (WMATA) about the potential to extend bus service to the area as early as 2018. WMATA is in the process of developing route options and potential bus stop locations in conjunction with the property owners, the BID, and DDOT. As a result of those discussions, Route 74, which currently runs along P Street SW between Half Street and 4th Street, would be

modified to extend the route from the Half Street/O Street SW terminus to the new DC United Stadium at the intersection of 2nd and R Streets SW. Under this option, service would be extended along Half Street, P Street, 2nd Street, V Street, 1st Street, T Street, and 2nd Street to P Street (https://www.wmata.com/service/bus/upload/2018-SOGO-Docket-B17-03-DC-Maps.pdf). The anticipated timeframe for implementation is June 2018.

Metrorail Service

The proposed project is located approximately one mile from both the Navy Yard Metro Station and Waterfront Metro Station. The Navy Yard Metro Station and Waterfront Metro Station provide access to the Metro Green line. Riders can transfer to the Blue, Orange, Silver, and Yellow lines at L'Enfant Plaza Metro Station or to the Red Line at Gallery Place-Chinatown Metro Station.

The minimum, maximum, and average headways for the Green Line are summarized in Table 2.

Table 2
Metrorail Headways (in minutes)

Headway*	AM Rush 5:00 AM – 9:30 AM	Midday 9:30 AM – 3:00 PM	PM Rush 3:00 PM – 7:00 PM	Evening 7:00 PM – 9:30 PM	Late Night 9:30 PM – Close	Weekend Open – 9:30 PM	Weekend 9:30 PM – Close
Green Line (Navy Yard - Ballpark Metro Station/Waterfront Metro Station)							
Min	0:08	0:12	0:08	0:12	0:20	0:12	0:20
Max	0:08	0:12	0:08	0:12	0:20	0:15	0:20

* Headways presented represent headways in both directions.

According to WMATA's Metrorail Station Access and Capacity Study, the Navy Yard Metro Station had the 14th highest pedestrian access during the PM peak period in 2002 out of the 86 stations studied (the Silver Line was not open at the time of the study). The station also is among the list of high forecasted development stations and is expected to see an increase in ridership of 80 percent between 2005 and 2030. The projected increase in ridership is based on an anticipated 87.2 percent increase in households and 61.3 percent increase in jobs in the area during the same time period. Similarly, the Waterfront Metro Station is expected to see an increase in ridership of approximately 11.4 percent between 2005 and 2030.

The Metrorail Station Access and Capacity Study provided a list of recommendations for the Navy Yard Metro Station, including the following:

- Relocate kiosk, fare gate and fare card vendor to surface,
- Add additional fare gates and fare card vendors,
- Construct new stair between mezzanine and platform, and
- Install new elevator between surface and platform.

These improvements were made at the west station entrance in conjunction with the construction of the office building at 55 M Street prior to the opening of Nationals' Park. The improvements tripled the operating capacity of the station (from 5,000 to 15,000 persons per hour).

Bus Service

The site also is approximately one mile from bus stops serving nine WMATA routes, the DC Circulator, Maryland Transit Authority (MTA), Potomac and Rappahannock Transportation Commission (PRTC), and Loudon County Transit routes. Stops on P Street currently are served by one Metrobus route (74). Stops along M Street are served by five Metrobus routes (P6, V1, V4, A9, & W9); the DC Circulator Union Station – Navy Yard route, which provides direct access to the most important intercity rail and bus terminal in the metro area; Loudoun County Commuter buses; MTA Commuter buses; and PRTC Commuter buses.

The minimum, maximum, and average headways for the WMATA and DC Circulator routes are provided in Table 3. The minimum, maximum, and average headways for the commuter bus routes are provided in Table 4.

Table 3
Metrobus and DC Circulator Headways (in minutes)

Headway	Northbound/Westbound			Southbound/Eastbound		
	AM Peak 7:00 AM – 10:00 AM	Midday 10:00 AM – 4:00 PM	PM Peak 4:00 PM – 7:00 PM	AM Peak 7:00 AM – 10:00 AM	Midday 10:00 AM – 4:00 PM	PM Peak 4:00 PM – 7:00 PM
Martin Luther King Jr. Avenue Limited Line (A9)						
Min	0:15	N/A	N/A	N/A	N/A	0:14
Max	0:19	N/A	N/A	N/A	N/A	0:25
Avg	0:16	N/A	N/A	N/A	N/A	0:18
Anacostia – Eckington Line (P6)						
Min	0:10	0:15	0:15	0:11	0:15	0:11
Max	0:24	0:24	0:24	0:31	0:25	0:30
Avg	0:17	0:20	0:18	0:17	0:22	0:17
Benning Heights – M Street Line (V1)						
Min	0:16	N/A	N/A	N/A	0:22	0:19
Max	0:29	N/A	N/A	N/A	0:22	0:22
Avg	0:22	N/A	N/A	N/A	0:22	0:22
Capitol Heights – Minnesota Avenue Line (V4)						
Min	0:12	0:19	0:16	0:15	0:16	0:16
Max	0:21	0:38	0:25	0:30	0:30	0:20
Avg	0:16	0:30	0:18	0:19	0:25	0:18

Table 3 (continued)
Metrobus and DC Circulator Headways (in minutes)

Headway	Northbound/Westbound			Southbound/Eastbound		
	AM Peak 7:00 AM – 10:00 AM	Midday 10:00 AM – 4:00 PM	PM Peak 4:00 PM – 7:00 PM	AM Peak 7:00 AM – 10:00 AM	Midday 10:00 AM – 4:00 PM	PM Peak 4:00 PM – 7:00 PM
Convention Center – Southwest Waterfront Line (74)						
Min	0:12	0:20	0:13	0:11	0:20	0:13
Max	0:20	0:22	0:21	0:20	0:21	0:21
Avg	0:14	0:20	0:16	0:14	0:20	0:16
L'Enfant Plaza – Coast Guard Limited Line (W9)						
Min	N/A	N/A	0:11	0:14	N/A	N/A
Max	N/A	N/A	0:35	0:27	N/A	N/A
Avg	N/A	N/A	0:25	0:21	N/A	N/A
DC Circulator Union Station – Navy Yard Line						
Min	0:10	0:10	0:10	0:10	0:10	0:10
Max	0:10	0:10	0:10	0:10	0:10	0:10
Avg	0:10	0:10	0:10	0:10	0:10	0:10

Table 4
Commuter Bus Headways (in minutes)

Headway	Northbound/Westbound		Southbound/Eastbound	
	AM Peak Period	PM Peak Period	AM Peak Period	PM Peak Period
MTA Commuter Bus: Columbia and Silver Spring – Washington DC (315)				
Min	N/A	0:20	0:20	N/A
Max	N/A	0:30	0:28	N/A
Avg	N/A	0:23	0:24	N/A
MTA Commuter Bus: Charlotte Hall/Waldorf –Washington DC (735)				
Min	0:20	N/A	N/A	0:15
Max	0:30	N/A	N/A	0:30
Avg	0:27	N/A	N/A	0:24
Loudoun County Transit Commuter Bus: Arlington, VA & Washington, DC				
Min	N/A	0:02	0:05	N/A
Max	N/A	0:37	1:24	N/A
Avg	N/A	0:15	0:41	N/A
PRTC OmniRide: Dale City – Washington Navy Yard (D300)				
Min	N/A	0:14	0:25	N/A
Max	N/A	1:47	0:31	N/A
Avg	N/A	0:56	0:28	N/A

Existing bus and Metrorail service is shown on Figure 2.

Existing Pedestrian Facilities

The District of Columbia Pedestrian Master Plan (the Pedestrian Plan) strives to make Washington, DC safer and more walkable by improving sidewalks, roadway crossings, and the quality of the pedestrian environment as well as by ensuring that the District's policies and procedures support walking.

The Pedestrian Plan provides an overview of existing pedestrian conditions, recommends new pedestrian projects and programs, establishes performance measures, and provides a plan for implementation through 2018. The Pedestrian Plan also estimates areas of pedestrian activity and deficiency.

As part of the Pedestrian Plan, eight priority corridors (one in each ward) were identified based on areas of heavy pedestrian traffic and deficient walking conditions. The priority corridor in Ward 6 is M Street between 6th Street SW and Isaac Hull SE. None of the study intersections are included in the priority corridor.

Per DDOT's request, an assessment of existing conditions for all pedestrian facilities within one block of the proposed development, including the route to the nearest Metro Station, was conducted. The results of this assessment are depicted on Figure 3. A summary of the existing pedestrian facilities provided at each of the study intersections is presented in Table 5. Based on field observations made in the study area, current construction activities may account for some existing gaps in the pedestrian network.

Table 5
Pedestrian Inventory by Intersection

Intersection	Pedestrian Heads/ Countdown	Type of Crosswalks	One Ramp/ Crosswalk	Tactile Warning Strip
2nd Street/P Street (Unsignalized)	N/A	All Legs – High Visibility	Yes	Yes
2nd Street/Q Street (Unsignalized)	N/A	West Leg – High Visibility Note 1	No Note 2	No Note 2
2nd Street/R Street (Unsignalized)	Note 3			
2nd Street/T Street (Unsignalized)	Note 3			
2nd Street/V Street (Unsignalized)	N/A	East leg – High Visibility Note 4	No Note 5	No Note 6
1st Street/V Street (Unsignalized)	N/A	All Legs – Standard Note 7	No Note 8	No Note 9
1st Street/T Street (Unsignalized)	Note 10			
1st Street/R Street/Potomac Avenue (Unsignalized)	Note 11			

1. Crosswalk only along the western leg.
2. Ramps missing on the northeast and southeast corner of the intersection.
3. No crosswalk present at the intersection, since the sidewalk is present only on 2nd Street.
4. Crosswalk present only on the eastern leg.
5. One ramp on northwest corner, one ramp on northeast corner, one ramp on southwest corner, and two ramps on southeast corner.
6. Tactile warning strip missing on all ramps. Crosswalk only on the western and northern legs.
7. No crosswalk present on the eastern and southern leg.
8. One ramp on northeast corner, two ramps on northwest corner, and one ramp on southwest corner.
9. Tactile warning strips are only present for the ramp on the northwest corner of the intersection.
10. No crosswalk present at the intersection, since there are no sidewalks on 1st Street and T Street.
11. No crosswalk present since no sidewalks are present on R Street, Potomac Avenue, and 1st Street.

In conjunction with the approval of the proposed redevelopment of 1900 Half Street, the developer of the project will construct a Riverwalk from the rear of the property to the riverbank of the Anacostia River and will be designed and constructed to tie in to the proposed Riverwalk Trail as it is completed on adjacent properties. The developer also agreed to install missing sidewalks and crosswalks along Half Street SW, Water Street SW, and T Street SW, and to construct a sidewalk along the east side of Half Street, between T Street and S Street.

As a part of the DC United Stadium Study, improvements to the sidewalks along Half Street north of S Street to Potomac Avenue and along Potomac Avenue to South Capitol Street, and along 2nd Street and R Street are proposed.

As part of the 88 V Street zoning approval, DDOT requested that a minimum six-foot sidewalk be constructed along the east side of 1st Street between T Street and V Street. The 2100 2nd Street project would provide an 8-foot sidewalk and an 8-foot tenant zone on V Street along the property frontage. A 10-foot sidewalk and a 10-foot tenant zone is also proposed on 1st Street along the property frontage. On east side of 2nd Street a 10-foot sidewalk is proposed, while a 6-foot sidewalk is proposed on the west side of 2nd Street. A 12-foot shared-use path will be provided on the south side of the site to connect to the Riverwalk Trail.

Existing Bicycle Facilities

The District of Columbia Bicycle Master Plan (the Bicycle Plan) seeks to create a more bicycle-friendly city by establishing high-quality bicycle facilities and programs that are safe and convenient.

The Bicycle Plan provides bicycle levels of service (BLOS) for roadways in the District where bicycles share the road with vehicles. The Bicycle Plan also reports the number of bicycle crashes that occurred between 2000 and 2002.

Finally, the Bicycle Plan identifies areas and corridors that are barriers to cyclists. These barriers include "freeways, railroad and highway grade separations, neighborhoods with heavy traffic, and other impediments to bicycle travel." No such barriers were identified in the vicinity of the site.

Planned/Programmed Bicycle Improvements

In conjunction with the 1900 Half Street redevelopment, a cycle track will be constructed along T Street, between the Riverwalk and Water Street.

As a part of the DC United Stadium, the following cycle tracks are proposed to be constructed within the vicinity of the site:

- West side of 2nd Street in between R Street and V Street,
- North side of R Street in between 2nd Street and 1st Street, and
- North side of Potomac Avenue in between 1st Street and South Capitol Street.

In conjunction with the 2100 2nd Street redevelopment, a cycle track will be constructed along the west side of 2nd Street, between the V Street and southern side of the 2100 2nd Street property. A shared-use path would be constructed along the southern side of 2100 2nd Street.

In conjunction with the subject project, a cycle track will be constructed along the west side of 2nd Street, between the V Street and T Street.

Capital Bikeshare

Capital Bikeshare is an automated bicycle rental or bicycle sharing program that provides over 3,700 bicycles at 440 stations across Washington, DC, Arlington, VA, Alexandria, VA, Montgomery County, MD, and Fairfax County, VA.

Membership, which is required to use Capital Bikeshare, includes five options for joining: single trip ($2), 24 hours ($8), three days ($17), 30 days ($28), or one year ($85).
Under any membership option, the first 30 minutes of use are free; users then are charged a usage fee for each additional 30-minute period. Bicycles can be returned to any station with an available dock.

As shown on Figure 2, the closest Bikeshare stations are located more than ½ mile from the site at 1st Street/N Street, SE and M Street/4th Street, SW. The station on 1st Street/N Street, SE includes 39 docks and the station on M Street/4th Street, SW includes 23 docks.

The District of Columbia Capital Bikeshare Development Plan outlines a system-wide expansion plan including 99 new Bikeshare stations by the end of 2018 and 21 existing stations to be expanded by the end of 2017. In the vicinity of the site, the nearest new Bikeshare station is identified on P Street east of 4th Street and is slated for completion in 2018.

The developer for the 1900 Half Street and 2100 2nd Street redevelopment will each install a Capital Bikeshare station in the vicinity of the project.

As a part of the DC United Stadium project, one or more Capital Bikeshare are proposed around the stadium.

Car Sharing Services

Two car-sharing providers currently operate in the District. Zipcar requires a $25 application fee and members can choose from three plans: occasional driving plan - $70 per year (pay as you go based on the standard hourly or daily rate), monthly plan - $7 per month (pay as you go based on the standard hourly or daily rate), or extra value plan - $50 per month, $75 per month (1 month rollover), $125 per month (2 month rollover), and $250 per month (2 month rollover) (after using up the monthly cash, pay as you go based on a discounted hourly or daily rate). Cars must be returned to the same designated parking spaces from which they were picked up. One Zipcar is located at 525 Water Condos within one mile of the site.

Car2Go requires a one-time $5 application fee. Once registered, a member card is issued, which enables members to access an available car. Car2Go members can choose from two plans: smart fortwo – $0.41 per minute/$15 per hour/$59 per day, and Mercedes-Benz CLA & GLA –

$0.47 per minute/$19 per hour/$89 per day. No reservation is required and car usage is charged by the minute, with hourly and daily maximum fees. Unlike Zipcar, a Car2Go vehicle does not have to be returned to its original location; a Car2Go vehicle can be parked in any unrestricted curbside parking space, in any metered/paystation curbside parking space (without paying meter/paystation fees), or in any residential permit parking space. Car2Go currently has 500 vehicles in the District.

EXISTING CONDITIONS ANALYSIS

TRAFFIC VOLUMES

Vehicular turning movement, bicycle, and pedestrian counts were conducted by Wells + Associates on February 16, 2017 from 7:00 AM to 10:00 AM and from 4:00 PM to 7:00 PM, and March 2, 2017 from 7:00 AM to 9:00 AM and from 5:00 PM to 7:00 PM. AM and PM peak hours for each of the study intersections were determined individually to provide the most conservative peak hour analysis.

Existing vehicular peak hour traffic volumes are shown on Figure 4. Pedestrian volumes are shown on Figure 5. Traffic count data are included in Appendix C.

CAPACITY ANALYSIS

Capacity/level of service (LOS) analyses were conducted at the study intersections based on the existing lane use and traffic control shown on Figure 6, baseline traffic volumes shown on Figure 4, and pedestrian volumes shown on Figure 5.

Synchro software (Version 9.1, Build 912) was used to evaluate levels of service at the study intersections for the AM and PM peak hours. Synchro is a macroscopic model used to evaluate the effects of changing intersection geometrics, traffic demands, traffic control, and/or traffic signal settings and to optimize traffic signal timings. The levels of service reported were taken from the Highway Capacity Manual 2010 reports generated by Synchro. Level of service descriptions are included in Appendix D.

The results of the analyses are summarized in Table 6. Capacity analysis worksheets are included in Appendix E.

As shown in Table 6, no approach operates at a LOS E or LOS F under existing conditions.

Table 6
Level of Service Summary

Approach	Existing Conditions		Background Conditions		Total Future Conditions	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
1. 2nd Street/P Street						
EB	A	C	A	C	B	F [70.6]
WB	A	A	B	B	D	D
NB	A	B	A	B	E [36.7]	F [147.0]
SB	B	B	B	B	F [61.0]	F [135.3]
Overall	**B**	**C**	**B**	**B**	**E [38.9]**	**F [103.1]**
2. 2nd Street/Q Street						
EB	B	C	B	E [35.0]	C	F [550.3]
WB	B	B	B	C	C	F [61.8]
NB†	N/A	N/A	A	A	A	A
SB	A	A	A	A	A	A
3. 2nd Street/R Street						
WB	A	A	A	E [35.1]	F [62.6]	F [3420.2]
NB†	N/A	N/A	A	A	A	A
SB	A	A	A	A	A	A
4. 2nd Street/T Street						
WB	A	A	A	B	B	C
NB†	N/A	N/A	A	A	A	A
SB	A	A	A	A	A	A
5. 2nd Street/V Street						
EB	A	A	A	A	A	A
WB	A	A	A	B	A	B
NB	A	A	A	B	A	B
SB	A	B	A	B	A	B
Overall	**A**	**B**	**A**	**B**	**A**	**B**

[x.x] = unsignalized intersection control delay in sec/veh
(x.x) = signalized intersection control delay in sec/veh
† Denotes approach proposed with DC United Stadium project.
‡ Under existing conditions, the intersection is a five-legged intersection. The lane configuration of the intersection will be revised with the DC United project wherein it will be split into two intersections.

Table 6 (continued)
Level of Service Summary

Approach	Existing Conditions		Background Conditions		Total Future Conditions	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
6. 1st Street/V Street						
EB	A	B	B	B	B	C
NB	A	A	A	A	A	A
SB†	N/A	N/A	A	A	A	A
7. 1st Street/T Street						
EB	Intersection Under Construction		A	A	B	C
NB			A	A	B	D
SB†			A	A	B	D
Overall			**A**	**A**	**B**	**D**
8A. 1st Street/R Street/Potomac Avenue‡						
EB	Intersection Under Construction		A	A	A	A
WB			A	A	A	A
SB			A	B	B	D
8B. 1st Street/R Street/Potomac Avenue‡						
EB	Intersection Under Construction		A	A	A	A
WB			A	A	A	A
NB			A	B	B	D

[x.x] = unsignalized intersection control delay in sec/veh
(x.x) = signalized intersection control delay in sec/veh
† Denotes lane configuration proposed with DC United Stadium project.
‡ Under existing conditions, the intersection is a five-legged intersection. The lane configuration of the intersection will be revised with the DC United project wherein it will be split into two intersections.

QUEUE ANALYSIS

A queuing analysis was conducted for existing conditions using the 95th percentile queue lengths reported by Synchro. The results are summarized in Table 7. Queue reports are provided in Appendix E.

As shown in Table 7, no queues exceed the available storage under existing conditions.

Table 7
Synchro 95th Percentile Queue Summary (in feet)

Approach	Available Storage §	Existing Conditions		Background Conditions		Total Future Conditions	
		AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
1. 2nd Street/P Street							
EBLT	130'/375'	25	188	20	45	35	83
EBR#	150'	N/A	N/A	10	133	15	353
WBLTR	355'	20	8	28	13	125	95
NBLTR	390'	5	18	10	30	198	498
SBLTR	150'/290'	35	25	45	53	283	458
2. 2nd Street/Q Street							
EBLTR	890'	3	33	5	55	13	240
WBLTR	355'	10	5	10	5	30	28
NBLTR†	420'	N/A	N/A	0	0	0	0
SBLTR	390'	0	13	0	13	0	23
3. 2nd Street/R Street							
WBL*	365'	0	0	N/A	N/A	N/A	N/A
WBLR†		N/A	N/A	3	85	195	1190
NBTR†	430'	N/A	N/A	0	0	0	0
SBLT	410'	0	0	3	18	3	38
4. 2nd Street/T Street							
WBL*	375'	0	0	N/A	N/A	N/A	N/A
WBLR†		N/A	N/A	0	3	38	103
NBTR†	920'	N/A	N/A	0	0	0	0
SBLT	320'	0	0	0	3	15	20
5. 2nd Street/V Street							
EBTR*	30'/440'	0	0	N/A	N/A	N/A	N/A
EBLTR†		N/A	N/A	0	0	0	0
WBLT*	350'	0	0	N/A	N/A	N/A	N/A
WBLTR†		N/A	N/A	5	25	5	25
NBLR*	320'	0	0	N/A	N/A	N/A	N/A
NBLTR†		N/A	N/A	15	38	15	38
SBLTR	920'	5	43	8	48	20	80

§ All distances measured to nearest intersection or end of turn lane, as appropriate. Where two storage lengths are given, the first is the distance to the driveway, the second is the distance to the nearest intersection.
# Denotes lane configuration proposed with 2100 2nd Street SW project.
* Denotes existing lane configuration.
† Denotes lane configuration proposed with DC United Stadium project.

Table 7 (Continued)
Synchro 95th Percentile Queue Summary (in feet)

Approach	Available Storage §	Existing Conditions		Background Conditions		Total Future Conditions	
		AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
6. 1st Street/V Street							
EBLTR	350’	5	31	15	38	30	73
NBLTR	300’	0	0	0	0	0	0
SBLTR†	910’	N/A	N/A	0	0	3	3
7. 1st Street/T Street							
EBL*	360’	Intersection Under Construction		N/A	N/A	N/A	N/A
EBLR†				0	5	35	73
NBLT	910’			18	28	90	243
SBTR†	910’			5	25	68	240
8A. 1st Street/R Street/Potomac Avenue‡							
EBLT†	365’	Intersection Under Construction		0	0	8	13
WBTR†	110’			0	0	0	0
SBLR†	360’			3	3	30	80
8B. 1st Street/R Street/Potomac Avenue‡							
EBTR†	110’	Intersection Under Construction		0	0	0	0
WBLT†	400’			3	15	20	55
NBR†	920’			15	38	53	198

§ All distances measured to nearest intersection or end of turn lane, as appropriate. Where two storage lengths are given, the first is the distance to the driveway, the second is the distance to the nearest intersection.
* Denotes existing lane configuration.
† Denotes lane configuration proposed with DC United Stadium project.

SAFETY ANALYSIS

Crash data at the study intersections were obtained from DDOT. The information provided by DDOT included the total number of crashes over the latest three years of available data (i.e. 2015, 2016, and 2017) at each intersection and was further categorized by type of crash. Based on the data, Table 8 shows the overall intersection crash rates at each of the study intersections.

Table 8
Crash Data Summary

Intersection	Type of Control	No. of Crashes (3 Years)	ADT (veh/day)	Crash Rate (MEV)
2nd Street/P Street	All-way Stop	3	7,420	0.37
2nd Street/Q Street	Two-way Stop	1	5,560	0.16
2nd Street/R Street	Two-way Stop	1	2,510	0.36
2nd Street/T Street	Two-way Stop	1	2,560	0.36
2nd Street/V Street*	All-way Stop	N/A	2,320	N/A
1st Street/V Street*	Two-way Stop	N/A	2,330	N/A
1st Street/T Street	Two-way Stop	2	N/A	N/A
1st Street/R Street/Potomac Avenue‡	Two-way Stop	2	N/A	N/A

*No crashes reported for the intersection.
‡ Under existing conditions, the intersection under construction.

As shown in Table 8, none of the study intersections have a crash rate greater than or equal to 1.0 MEV.

FUTURE BACKGROUND CONDITIONS

TRAFFIC VOLUMES

Overview

In order to forecast year 2023 background traffic volumes in the study area without the proposed development, increases in traffic associated with growth outside the immediate site vicinity (regional growth) and increases in traffic associated with planned or approved but not yet constructed developments in the study area (pipeline developments) were considered.

Regional Growth

DDOT's historical average daily traffic (ADT) volume maps were examined to determine an appropriate growth rate for the study area. The historical ADTs indicate that traffic volumes in the study area generally have a growth rate less than ½ percent. In order to account for the trips generated by the DC United Stadium, however, a growth rate of one percent per year compounded annually over six years (2017 to 2023) was applied to the existing vehicular volumes shown on Figure 4. The resulting 2023 volumes with regional growth are shown on Figure 7A. To account for the roadway network changes proposed in conjunction with the South Capitol Street Corridor project, the DC United Stadium, and the other pipeline projects, the traffic volumes shown on Figure 7A were rerouted based on the future roadway network. The rerouted volumes are shown on Figure 7B.

Pipeline Developments

Four additional pipeline developments planned in the study area were identified during the scoping process. Traffic volumes for the pipeline developments are shown on Figure 8. A summary of the pipeline developments is provided below.

1900 Half Street SW

The 1900 Half Street SW is a mixed-use development that will feature approximately 462 residential dwelling units and 24,000 SF of retail space. It is anticipated that construction will be completed in 2019. Site trip assignments for the development were taken from the Comprehensive Transportation Review for 1900 Half Street SW prepared by Gorove/Slade, dated May 19, 2016. According to the study, the 1900 Half Street SW development will generate an estimated 150 AM peak hour vehicle trips and 207 PM peak hour vehicle trips.

Peninsula 88 (88 V Street SW)

Peninsula 88 will feature approximately 110 residential dwelling units and 1,700 SF of retail space. It is anticipated that construction will be completed in 2019. Site trip assignments for the development were taken from the Peninsula 88 Comprehensive Transportation Review prepared by Wells + Associates, dated January 2017. According to the study, the Peninsula 88 development will generate an estimated 44 AM peak hour vehicle trips and 62 PM peak hour vehicle trips.

2100 2nd Street SW

2100 2nd Street SW will feature approximately 485 residential dwelling units, 33,368 SF of retail space, and 38,087 SF of restaurant space. It is anticipated that construction will be completed in 2020. Site trip assignments for the development were taken from the 2100 2nd Street, SW Comprehensive Transportation Review prepared by Wells + Associates, dated April 2017. According to the study, the 2100 2nd Street SW development will generate an estimated 178 AM peak hour vehicle trips and 483 PM peak hour vehicle trips.

1542 1st Street SW

1542 1st Street SW will feature approximately eight residential dwelling units. It is anticipated that construction will be completed in 2021. The proposed development will generate an estimated four AM peak hour vehicle trips and eleven PM peak hour vehicle trips.

Background Forecasts

Background 2023 traffic forecasts (without the proposed development) were developed by combining the rerouted traffic volumes (taking into account the planned roadway network

changes) grown to the year 2023 (shown on Figure 7B) with the pipeline traffic volumes shown on Figure 8. The resulting 2023 background traffic forecasts are shown on Figure 9.

CAPACITY ANALYSIS

Capacity/level of service (LOS) analyses were conducted at the study intersections based on the future lane use and traffic control shown on Figure 10 and future background traffic forecasts shown on Figure 9.

The level of service results for the 2023 background conditions are presented in Appendix F and summarized in Table 6. As shown in Table 6, background conditions are generally consistent with existing conditions. All approaches operate at a LOS C or better except for the eastbound approach at 2nd Street/Q Street and westbound approach at 2nd Street/R Street which operates at a LOS E during the PM peak hour under background conditions.

QUEUE ANALYSIS

A queuing analysis was conducted for 2023 background conditions using the 95th percentile queue reported by Synchro. The results are summarized in Table 7. Queue reports are provided in Appendix F.

As shown in Table 7, the 95th percentile queues at the study intersections under background conditions are generally consistent with existing conditions. No queues exceed the available storage under background conditions.

SITE ANALYSIS

OVERVIEW

The subject site is located on Squares 0611 and 0609 in Ward 6 and is located in the Southwest quadrant of the District. The site is bordered by 1st Street SW to the east, 2nd Street SW to the west, T Street SW to the north, and V Street SW to the south. The property is located in the CG-4 zone and currently is occupied by a surface parking lot, housing approximately 646 parking spaces, including 22 motorcycle parking spaces.

The Applicant proposes to renovate and convert the existing building to include approximately 1,563 apartment dwelling units, 452 condominium dwelling units, 250,580 SF of office, a 201 key hotel, 41,221 SF of retail, a 45,794 SF elementary school, and 39,943 SF devoted to DC Central Kitchen, which is a community kitchen that provides culinary training for jobless adults and provides the prepared food to homeless shelters, schools, and nonprofit organizations.

SITE ACCESS AND CIRCULATION

Vehicular Access

Access to the existing surface parking lot that currently occupies the site is provided via five curb cuts: three on 1st Street and two on 2nd Street. Parking access to the proposed below-grade parking for the project is proposed via three curb cuts: one on 1st Street (24 feet wide), one on 2nd Street (24 feet wide), and one on T Street (24 feet wide). Access to the below-grade loading facilities is proposed via a curb cut on 2nd Street (24 feet wide). All curb cuts will meet the spacing criteria outlined in the 2017 *Design and Engineering Manual* and all curb cuts will allow for front-in/front-out maneuvers.

Pedestrian and Bicycle Access

Since the project still is in the Master Planning phase, specific vertical designs for each of the anticipated 10 buildings has not yet been undertaken. However, from a site-wide planning level, the Applicant proposes to create significant pedestrian and bicycle pathways internally through the site. A curved pedestrian and bicycle spine is proposed longitudinally through the site along with a shared street (U Street) horizontally through the site that will be designed to primarily serve pedestrians and bicycles. Automobiles also will be accommodated; however, the street will be designed so as not to encourage significant cut-through traffic. It is envisioned that U Street, between 1st Street and 2nd Street primarily will serve drop-off/pick-up traffic for the project. The curb cuts for U Street on 1st Street and 2nd Street are proposed to be 18 feet in width.

The proposed pedestrian and bicycle accommodations through the site will provide connectivity to the planned cycle track on 2nd Street and the planned extension of the Anacostia River Walk Trail a block to the south along the waterfront.

Additionally, the proposed development of 100 V Street also will provide improved streetscapes and sidewalks along the north side of V Street, between 1st Street and 2nd Street; along the east side of 2nd Street, between V Street and T Street; along the west side of 1st Street, between V Street and T Street; and along the south side of T Street, between 1st Street and 2nd Street.

A conceptual diagram depicting the proposed pedestrian and bicycle facilities through the site is shown on Figure 11.

PROPOSED PARKING

Vehicular Parking

Based on parking requirements prescribed in the 2016 Zoning Regulations (ZR16), a **minimum** of 1,017 parking spaces would be required for the proposed development. A summary of the parking required and provided for each land use is provided in Table 9.

Table 9
Parking Summary

Land Use	Required Parking	Proposed Parking
Residential	1 per 3 units (in excess of four units) = (2,015-4)/3 670 spaces	765 reserved spaces @ 0.38 spaces/unit 578 shared parking spaces†
	Sub-total Residential	1,430 spaces
Retail	1.33 per 1,000 SF in excess of 3,000 SF = 1.33*(41,221-3,000)/1,000 51 spaces	51 spaces
Office	0.5 per 1,000 SF in excess of 3,000 SF =0.5*(250,580 -3,000)/1,000 124 spaces	124 spaces
Hotel	0.5 per 1,000 SF in excess of 3,000 SF =0.5*(150,660-3,000)/1,000 74 spaces	74 spaces
DC Central Kitchen‡	1.67 per 1,000 SF in excess of 5,000 SF = 1.67*(39,943-5,000)/1,000 58 spaces	58 spaces
Elementary School*	2 per 3 teachers and other employees =2*60/3 40 spaces	40 spaces
Total	**1,017 spaces**	**1,690 spaces**

† A portion of the residential spaces will not be dedicated exclusively for residential use. They will be shared with visitors.
‡ Parking requirement calculated based on the Institutional, general category of ZR16.
* The 45,794 SF Elementary School is assumed to have 60 staff

As shown in Table 9, the proposed development will provide 1,690 parking spaces. With an anticipated development including 10 buildings, the proposed parking supply would equate to approximately 170 spaces per building. The proposed parking supply also is further substantiated by DDOT's data (parkrightdc.org) and a professional third-party market study engaged by the Applicant, which suggest that the parking demand ratio for residential development in the Buzzard Point area is one (1) space/unit. Despite these indicators, the Applicant proposes a residential parking ratio substantially lower than one space per unit. Further, only a fraction of the parking will be reserved spaces (at the rate of 0.38 spaces per

unit). The remainder of the spaces will be in the general "pool" of parking and will be shared among the remaining uses and the general public visiting the neighborhood for DC United games or other attractions and events. Providing an adequate public parking supply is particularly important in the Buzzard Point area. The proposed DC United soccer stadium will not provide any on-site parking and will therefore rely completely upon other parking in the area. Indeed, the original traffic study conducted for the stadium included the existing 646 spaces on the Applicant's site as justification for the lack of parking at the stadium. The Applicant's site is immediately adjacent to the soccer stadium and will provide the most convenient access for patrons going to the stadium. Sufficient parking for the proposed project is critical to the viability of the subject project.

Bicycle Parking

The proposed development also would be required to provide long-term and short-term bicycle parking. Long-term bicycle parking is intended for use by employees and residents and must be located on the first level below grade or on the ground floor of each building. Short-term bicycle parking is intended for use by visitors to the site and should be located in public space with input from DDOT during the public space process. The required bicycle parking for the development is summarized in Table 10 below.

Table 10
Bicycle Parking Summary

Land Use	Required Parking		Proposed Parking
	Long-term†	Short-term	
Residential	1 per 3 units 2,015/3 = 672 long-term	1 per 20 units 2,015/20 = 75 short-term	**814 long-term spaces 100 short-term spaces‡**
Retail	1 per 10,000 SF 41,221/10,000= 41 long-term	1 per 3,500 SF 41,221/3,500= 12 short-term	
Office	1 per 2,500 SF 250,580/2,500= 75 long-term	1 per 40,000 SF 250,580/40,000= 6 short-term	
Hotel	1 per 10,000 SF 150,660/10,000= 15 long-term	1 per 40,000 SF 150,660/40,000= 4 short-term	
Elementary School	1 per 7,500 SF 45,794/7,500= 6 long-term	1 per 2,000 SF 45,794/2,000= 23 short-term	
DC Central Kitchen*	1 per 7,500 SF 39,943/7,500= 5 long-term	1 per 2,500 SF (min of 8) 39,943/2,500= 16 short-term	
Total	**814 long-term**	**136 short-term**	**814 long-term spaces 100 short-term spaces‡**

* Bicycle parking requirement calculated based on the Institutional, general category of ZR16.
† Note that per §802.2, after the first 50 bicycle parking spaces are provided for a use additional spaces are required at one half the specified ratio. However, DC law requires one bicycle space per three residential units, so no reduction was taken for the residential long-term bicycle parking.
‡ Note that per §802.3, no property shall be required to provide more than 100 short-term bicycle spaces. The exact location of short-term spaces will be determined during the public space process.

Proposed Loading

The loading requirements for the proposed development are prescribed by the ZR16 and are summarized in Table 11. Access to the loading berths is provided via the curb cut on 2nd Street such that the truck enters/exit the site front first. Although the exact number of loading berths has not yet been determined, the Applicant is designing the below-grade loading facilities to accommodate WB-40 trucks, SU-30 trucks and service/delivery vehicles. Truck maneuvers are provided in Appendix G.

Table 11
Loading Summary

Land Use	Required Loading
Residential	> 50 DU 1 loading berth + platform 1 service/delivery space
Retail	> 20,000 SF and < 100,000 SF of GFA 2 loading berths + platforms 1 service/delivery space
Office	> 200,000 SF of GFA 3 loading berths + platforms 1 service/delivery space
Hotel	> 100,000 SF and < 500,000 SF of GFA 3 loading berths + platforms 0 service/delivery space
Elementary School	> 30,000 SF and < 100,000 SF of GFA 1 loading berths + platforms 1 service/delivery space
DC Central Kitchen*	> 30,000 SF and < 100,000 SF of GFA 1 loading berths + platforms 1 service/delivery space
Total†	3 loading berths + platforms 1 service/delivery space

* Loading requirement calculated based on the Institutional, general category of ZR16.
† Per §901.8 of ZR16, where two or more uses share a building or structure, the uses may share loading as long as internal access is provided from all shared uses requiring loading.
‡ Note the design of the loading area is still being refined. The project will provide at minimum the required 3 Loading Berths and 1 Delivery Space.

TRIP GENERATION ANALYSIS

Overview

The total number of trips generated by the proposed development would be comprised of vehicular trips, pedestrian trips, bicycle trips, and transit trips.

Total Trips

The total number of trips anticipated to be generated by the proposed development was estimated based on the Institute of Transportation Engineers' (ITE's) Trip Generation Manual. Land Use Code (LUC) 220 (Apartment), LUC 230 (Condominium), LUC 710 (Office), LUC 310 (Hotel), LUC 520 (Elementary School), LUC 760 (Research and Development Center)[1], and LUC 820 (Retail) were used to estimate the total number of trips to/from the proposed project. The square footage of the retail and restaurant use and the number of dwelling units for the residential use were used as the independent variables.

The trip generation for the proposed development is summarized in Table 12. As shown, the proposed development would generate 1,834 ***total*** AM peak hour trips and 2,011 ***total*** PM peak hour trips based on standard ITE rates/equations.

Table 12
Site Trip Generation Summary

Land Use		AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Proposed Development							
1,563 DU Apartment (LUC 220)	Total Trips	154	615	769	570	307	877
	Non-auto Trips	*77*	*308*	*385*	*285*	*154*	*439*
	Transit	*57*	*228*	*285*	*211*	*114*	*325*
	Bicycle	*6*	*25*	*31*	*23*	*12*	*35*
	Pedestrian	*14*	*55*	*69*	*51*	*28*	*79*
	Vehicle Trips	77	307	384	285	153	438
452 DU Condominium (LUC 230)	Total Trips	29	144	173	139	68	207
	Non-auto Trips	*15*	*72*	*87*	*70*	*34*	*104*
	Transit	*11*	*53*	*64*	*51*	*25*	*76*
	Bicycle	*1*	*6*	*7*	*6*	*3*	*9*
	Pedestrian	*3*	*13*	*16*	*13*	*6*	*19*
	Vehicle Trips	14	72	86	69	34	103

[1] ITE LUC 760 (Research and Development Center) was determined to be the most appropriate use for the DC Central Kitchen, as this use has similar characteristics. Notably, research and development centers contain offices and light fabrication areas, as well as accommodate regular deliveries.

Table 12 (continued)
Site Trip Generation Summary

Land Use		AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Proposed Development							
250,580 SF Office (LUC 710)	Total Trips	351	48	399	61	298	359
	Non-auto Trips	*53*	*7*	*60*	*9*	*45*	*54*
	Transit	*39*	*5*	*44*	*7*	*33*	*40*
	Bicycle	*7*	*1*	*8*	*1*	*6*	*7*
	Pedestrian	*7*	*1*	*8*	*1*	*6*	*7*
	Vehicle Trips	298	41	339	52	253	305
41,221 SF Retail (LUC 820)	Total Trips	56	35	91	159	172	331
	Non-auto Trips	*34*	*21*	*55*	*95*	*103*	*198*
	Transit	*8*	*5*	*13*	*24*	*26*	*50*
	Bicycle	*6*	*4*	*10*	*16*	*17*	*33*
	Pedestrian	*20*	*12*	*32*	*55*	*60*	*115*
	Vehicle Trips	22	14	36	64	69	133
45,794 SF Elementary School (LUC 520)	Total Trips	133	105	238	25	30	55
	Non-auto Trips	*27*	*21*	*48*	*5*	*6*	*11*
	Transit	*20*	*16*	*36*	*4*	*4*	*8*
	Bicycle	*5*	*4*	*8*	*1*	*1*	*2*
	Pedestrian	*2*	*1*	*4*	-	*1*	*1*
	Vehicle Trips	106	84	190	20	24	44
39,943 SF DC Central Kitchen (LUC 760)	Total Trips	49	9	58	9	53	62
	Non-auto Trips	*7*	*1*	*8*	*1*	*8*	*9*
	Transit	*5*	*1*	*6*	*1*	*6*	*7*
	Bicycle	*1*	-	*1*	-	*1*	*1*
	Pedestrian	*1*	-	*1*	-	*1*	*1*
	Vehicle Trips	42	8	50	8	45	53

Table 12 (continued)
Site Trip Generation Summary

Land Use		AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Proposed Development							
	Total Trips	63	43	106	62	59	121
	Non-auto Trips	*13*	*9*	*22*	*12*	*12*	*24*
	Transit	*6*	*4*	*10*	*6*	*6*	*12*
	Bicycle	*-*	*-*	*-*	*-*	*-*	*-*
	Pedestrian	*7*	*5*	*12*	*6*	*6*	*12*
	Vehicle Trips	50	34	84	50	47	97
Sub-Total Proposed Development	Total Trips	835	999	1,834	1,025	986	2,011
	Non-auto Trips	*226*	*439*	*665*	*477*	*362*	*839*
	Transit	*146*	*312*	*458*	*304*	*214*	*518*
	Bicycle	*26*	*40*	*65*	*47*	*40*	*87*
	Pedestrian	*54*	*87*	*142*	*126*	*108*	*234*
	Vehicle Trips	609	560	1,169	548	624	1,172

Non-auto Mode Split

A portion of the trips generated by the proposed development would be made via non-auto modes of transportation. The percentage of site-generated trips that would use public transportation is dependent on the proximity of the site to transit stops, the walkability of the surrounding area, and the degree to which the use of public transit is encouraged, such as by implementation of a transportation demand management (TDM) program.

According to US Census data, approximately 40 percent of residents in the vicinity of the site take public transportation, 11 percent walk, and two percent bike. Another four percent carpool and another seven percent stay home, for a total non-auto mode split of 64 percent. However, a non-auto mode split of 50 percent was used for the residential component based on the proposed parking supply and the fact that the subject site is situated further from the Metro station than other locations within the same Census Tract. As agreed by DDOT, the non-auto mode split for the retail component was estimated to be 60 percent for the retail use based on the neighborhood serving nature of the proposed retail. A non-auto mode split of 15 percent was used for office and the DC Central Kitchen. A non-auto mode split of 20 percent was used for the elementary school and hotel.

Based on these mode split estimates, the project is expected to generate 665 AM peak hour trips and 839 PM peak hour trips by non-auto modes of transportation.

The non-auto trips will be comprised of transit, pedestrian, and bicycle trips. The estimates for the specific modes were based on data contained in the 2005 WMATA Ridership Survey. The breakdown of trips by specific modes is provided in Table 12.

Net New Vehicle Trips for Project

Taking into account the non-auto mode share, the proposed development would generate an estimated 1,169 AM peak hour vehicle trips and 1,172 PM peak hour vehicle trips, as shown on Table 12.

Public Parking Component

Per DDOT'S request, trips generated by "public" parking spaces were conservatively included (spaces that the project would not necessarily otherwise be generating trips for directly). For purposes of the analysis, a portion (58 percent) of the 578 "pooled" parking spaces were considered since not all of the spaces will be used during the weekday. The peak arrival and departure ratios for LUC 820 from the ITE Traffic Engineering Handbook, 6th Edition, were used for to determine the AM and PM peak hour trip generation for 333 public parking spaces. Based on the arrival and departure ratios, the public parking with 333 spaces would generate 103 AM peak hour vehicle trips and 373 PM peak hour vehicle trips as shown in Table 13.

Accounting for the public parking spaces, a total of 1,272 AM peak hour vehicle trips and 1,545 PM peak hour vehicle trips are projected to enter and exit the subject site, as shown in Table 13.

Table 13
Site Trip Generation Summary with Public Parking

Land Use	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
Sub-Total Proposed Development	609	560	1,169	548	624	1,172
333 Public Parking Spaces (LUC 820)	63	40	103	180	193	373
Total	**672**	**600**	**1,272**	**728**	**818**	**1,545**

Site Trip Distribution and Assignment

The distribution of peak hour site trips generated by the proposed development was based on existing traffic patterns in the study area and general knowledge of commuter routes to/from the site.

The trip distributions shown in Table 14 were applied to the vehicle trip generation for the proposed development. The resulting traffic assignments are as shown on Figure 12A for the residential, Figure 12B for the retail, Figure 12C for the office, Figure 12D for the hotel, Figure

12E for the elementary school, Figure 12F for the DC Central Kitchen, and Figure 12G for the public parking. The combined site trips for the development are shown on Figure 12H.

Table 14
Site Trip Distributions

Roadway	Direction	Distribution
2nd Street	South	25%
Potomac Avenue	South	45%
P Street	West	30%

TOTAL FUTURE CONDITIONS

TRAFFIC FORECASTS

Total future traffic forecasts with the proposed development were determined by combining the 2023 background traffic forecasts shown in Figure 9 with the site traffic volumes shown on Figure 12H to yield the 2023 total future traffic forecasts shown on Figure 13.

Capacity Analysis

Capacity analyses were performed at the study intersections using the future lane use and traffic controls shown on Figure 10 and the total future peak hour traffic forecasts shown on Figure 13.

The level of service results for the 2023 total future conditions with the proposed development are included in Appendix H and summarized in Table 6.

By comparing total future levels of service to background levels of service, the impact of the proposed development can be identified. In accordance with the methodology outlined during the scoping process, an impact is defined as follows:

- Degradation in overall or approach level of service to LOS E or LOS F, or
- Increase in overall or approach delay by more than five percent when compared to background conditions for intersections operating at an approach delay of LOS E or LOS F.

As shown in Table 6, intersection approaches are projected to maintain acceptable levels of service (LOS D or better) with the exception of:

- 2nd Street/P Street – the northbound and southbound approaches are projected to drop to a LOS E and LOS F, respectively during the AM peak hour, and the eastbound,

northbound, and southbound approaches are projected to drop to LOS F during the PM peak hour;

- 2nd Street/Q Street – the eastbound and westbound approaches are projected to drop to a LOS F during the PM peak hour; and
- 2nd Street/R Street – the westbound approach is projected to drop to a LOS F during both the AM and the PM peak hours.

As shown in Table 6, the overall delay of the study intersections is projected to maintain acceptable levels of service (LOS D or better) with the exception of 2nd Street/P Street which operates at a LOS E during the AM peak hour and at a LOS F during the PM peak hour.

Queue Analysis

A queuing analysis was conducted for 2023 total future conditions. Synchro was used to conduct the analyses, using the 95th percentile queue lengths. The results are summarized in Table 7 and queue reports are provided in Appendix H.

By comparing total future queues to background queues, the impact of the proposed development can be identified. In accordance with the methodology outlined during the scoping process, an impact is defined as:

- An increase in the 95th percentile queue greater than 150 feet when compared to background conditions, or
- An 95th percentile queue that exceeds the available storage length.

As shown in Table 7, the queue lengths would increase by more than 150 feet under total future conditions with the proposed development are:

- 2nd Street/P Street northbound and southbound approaches;
- 2nd Street/Q Street eastbound approach;
- 2nd Street/R Street westbound approach;
- 1st Street/T Street northbound and southbound approach; and
- 1st Street/R Street/Potomac Avenue northbound approach.

As shown in Table 7, all approaches have queue lengths that **would not exceed the available storage** under total future conditions with the proposed development with the following exceptions:

- 2nd Street/P Street – the eastbound right movement and the northbound and southbound approaches during the PM peak hour; and
- 2nd Street/R Street – the westbound approach during the PM peak hour.

IMPROVEMENT ANALYSIS

Since the proposed project is still in the master planning phase, it is premature to identify specific roadway improvements and timing of such improvements. It is anticipated that such improvements will be examined in more detail throughout the course of the Large Tract Review Process when the project's program is further solidified.

To help offset the impact of the proposed development, the Applicant has committed to implement a Transportation Demand Management Plan, as outlined below.

Transportation Demand Management Plan

Traffic and parking congestion can be solved in one of two ways: 1) increase supply or 2) decrease demand. Increasing supply requires constructing new roads, widening existing roads, building more parking spaces, or operating additional transit service. These solutions are often infeasible in constrained conditions in urban environments and, where feasible, can be expensive, time consuming, and in many instances, unacceptable to businesses, government agencies, and/or the general public. The demand for travel and parking can be influenced by TDM plans implemented by those in the private sector. Typical TDM measures include incentives to use transit or other non-auto modes of transportation, bicycle and pedestrian amenities, parking management, alternative work schedules, telecommuting, and better management of existing resources. TDM plans are most effective when tailored to a specific project or user group.

To encourage the use of non-auto modes of transportation and to offset the impact of the proposed development, the Applicant has developed comprehensive TDM plan. Specific TDM measures for the project would include:

1. A member of the property management team will be designated as the Transportation Management Coordinator (TMC). The TMC will be responsible for ensuring that transportation information is disseminated to residential, retail, and office tenants of the building. The position may be part of other duties assigned to the individual.

2. The property management website will include information on and/or links to current transportation programs and services, such as:

    - Capital Bikeshare,
    - Car-sharing services,
    - Ride-hailing services (e.g. Lyft or Uber),
    - Transportation Apps (e.g. Metro, Citymapper, Spotcycle, Transit),
    - Commuter Connections Rideshare Program, which provides complimentary information on a variety of commuter programs to assist in determining which commuting options work best for commuters,

- Commuter Connections Guaranteed Ride Home, which provides commuters who regularly (twice a week) carpool, vanpool, bike, walk or take transit to work with a free and reliable ride home in an emergency, and
- Commuter Connections Pools Program, which incentivizes commuters who currently drive alone to carpool. Participants can earn money for carpooling to work and must complete surveys and log information about their experience.

3. Electronic displays will be provided in a common, shared space in each building and will provide public transit information such as nearby Metrorail stations and schedules, Metrobus stops and schedules, car-sharing locations, and nearby Capital BikeShare locations indicating the number of bicycles available at each location.

4. Convenient and covered secure bike parking facilities will be provided with storage for at least the minimum required by the 2016 Zoning Regulations. Long-term bicycle spaces will be located on the property and will be accessible by residents and employees of the project.

5. A bicycle repair stations will be provided in the garage.

6. The Applicant will allow for a Capital Bikeshare station on site or in public spaces surrounding the site.

7. A minimum of 10 electric car charging stations will be provided in the garage.

8. A minimum of three parking space will be dedicated to a car sharing provider, subject to agreement by such provider.

CONCLUSIONS AND RECOMMENDATIONS

The conclusions and recommendations of this study are as follows:

1. The proposed project will transform an existing 646-space surface parking lot into a vibrant-mixed use development including, 1,563 apartments; 452 condominium units; 250,580 SF of office; a 201-key hotel; 41,221 SF of retail; a 45,794 SF elementary school; and 39,943 SF of space for DC Central Kitchen. The project likely will include 10 buildings with one below grade parking and loading structure.

2. Five existing curb cuts will be replaced by four proposed curb cuts and two intersections. Each of the proposed curb cuts will meet width and spacing criteria outlined in the 2017 *Design and Engineering Manual* and have been designed to allow for front-in/front-out maneuvers.

3. Approximately, 1,690 parking spaces (approximately 170 spaces per building) are proposed in a below-grade shared parking garage. Access to the proposed below grade

parking will be provided via one curb cut on 2nd Street, one curb cut on 1st Street, and one curb cut on T Street.

4. Access to the below-grade shared loading facility will be provided via a new curb cut on 2nd Street and has been designed so that trucks can enter and exit the site front-first via 2nd Street. The loading facility will accommodate up to a WB-40 truck.

5. A new connection is proposed through the site. U Street will be designed as a shared street, focused primarily on pedestrian and bicycle traffic. U Street will intersect with a longitudinal pedestrian/bicycle spine in the center of the site. This intersection of two pedestrian/bicycle paths is expected to help create a strong sense of place vital to the viability of the project. It is anticipated that vehicular traffic using U Street will be primarily pick-up/drop-off traffic for the project.

6. The Applicant will construct new streetscape along the property frontage on V Street, 1st Street, 2nd Street, and T Street.

7. The proposed development is anticipated to include up to 10 buildings on the nearly seven-acre site. The proposed development is anticipated to generate a 1,272 AM peak hour vehicle trips and 1,545 PM peak hour vehicle trips, including trips generated by other nearby uses that would use public parking in the proposed garage.

8. The Applicant will implement a Transportation Demand Management Plan to encourage the use of non-auto modes of transportation.

9. A number of improvements and changes will be made to the surrounding roadway network in conjunction with the DC United Stadium and various other developments in the region.

O:\Projects\7001 - 7500\7308 100 V Street SW\Documents\Reports\7308 TIS Report Final.docx

FIGURES

Filepath: O:\Projects\7001 - 7500\7308 100 V Street SW\Graphics\Report Graphics\Figure 1 - Site Location

Figure 1
Site Location

NORTH

100 V Street SW
Washington, DC

Figure 2
Mul. -Modal Transportation Network

Capital Bikeshare Locations (Number of Docks)
M Metrorail Station (Green Line)
XX Metrobus Route
XX MetroExtra Route
Bus Stop (Shelter)
Bus Stop (No Shelter)
Likely walk/bike route to/from transit stops

NORTH
100 V Street SW
Washington, DC

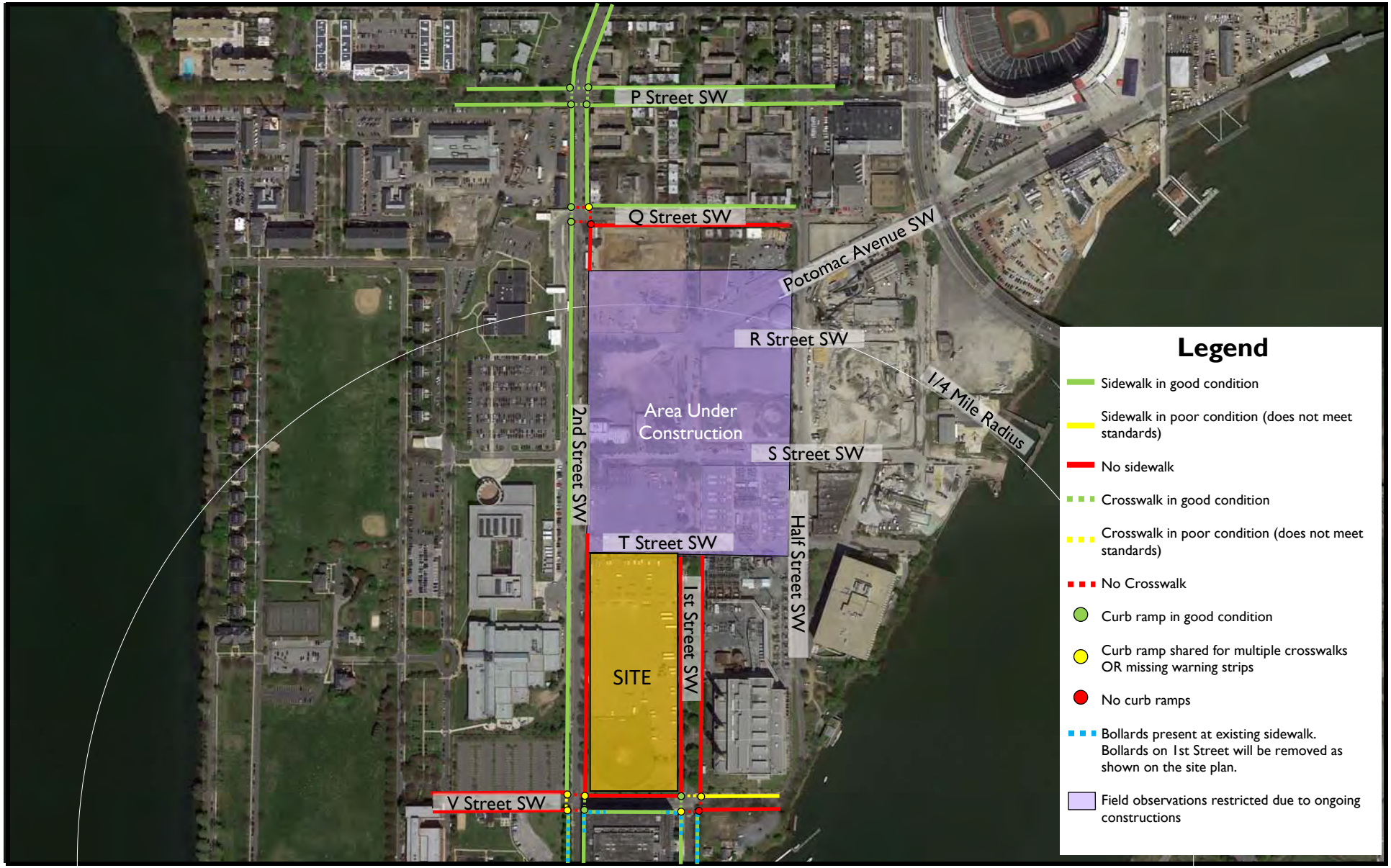
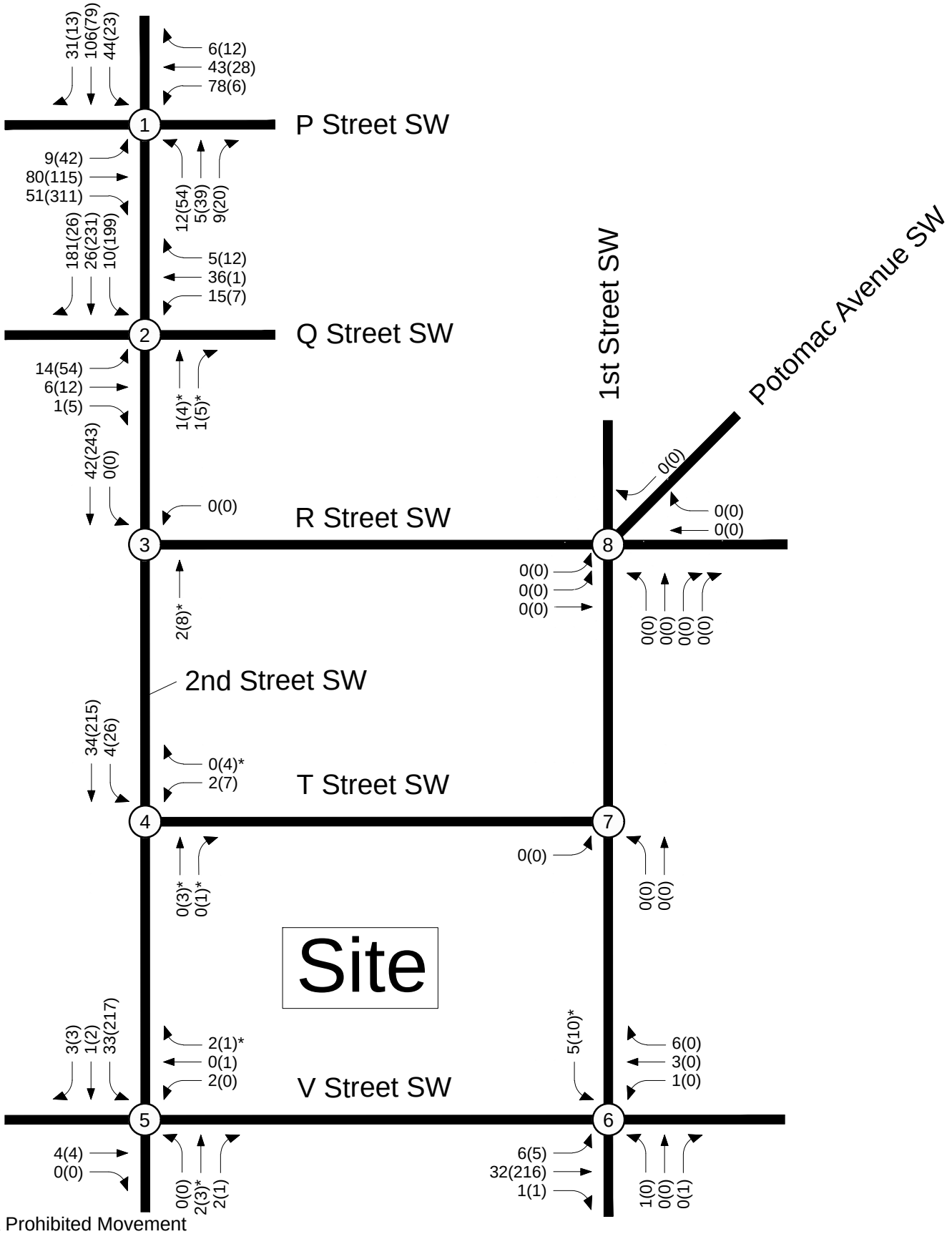


Figure 3
Qualita. ve Pedestrian Analysis

NORTH

100 V Street SW
Washington, DC



*Denotes a Prohibited Movement

Note: Intersections 7 and 8 were closed due to construction at the time counts were conducted.

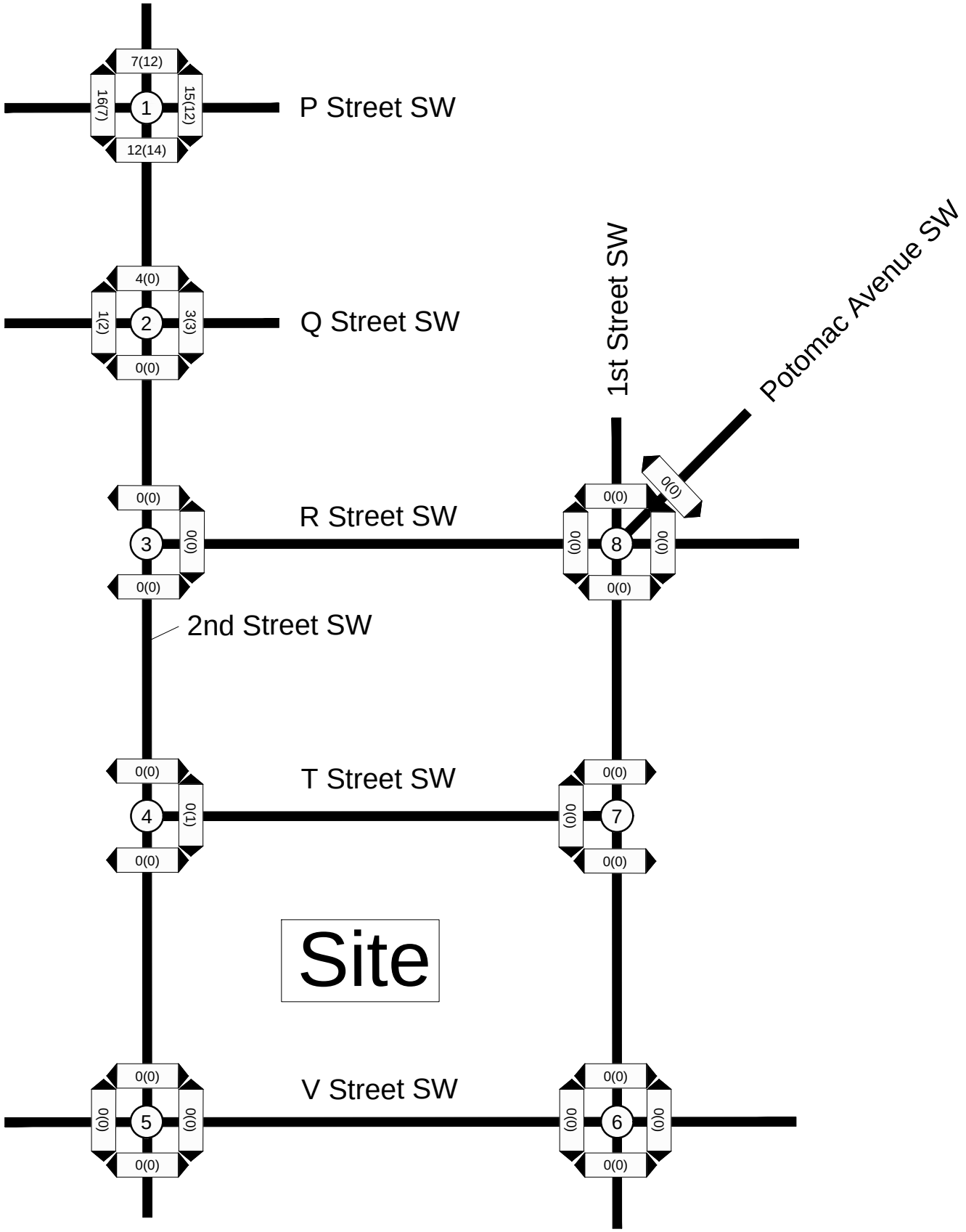
Figure 4

Existing Peak Hour Traffic Volumes

000 (000) AM PEAK HOUR / PM PEAK HOUR

NORTH

100 V Street SW
Washington, DC



Note: Intersections 7 and 8 are currently under construction and not include with the Existing Volumes.

Figure 5
Existing Pedestrian Volumes

AM PEAK HOUR
PM PEAK HOUR
000 (000)

NORTH
100 V Street SW
Washington, DC

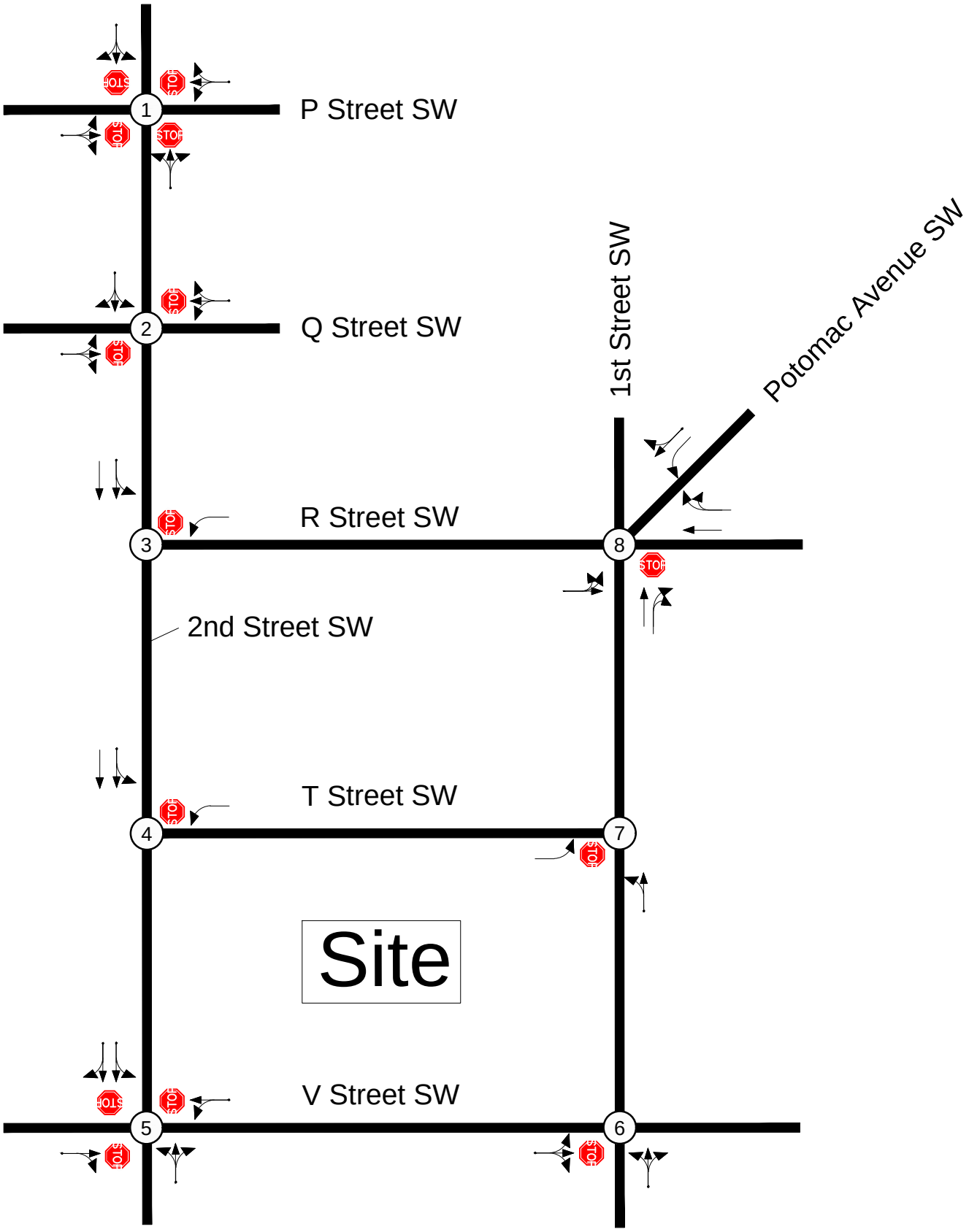


Figure 6

Existing Lane Use and Traffic Control

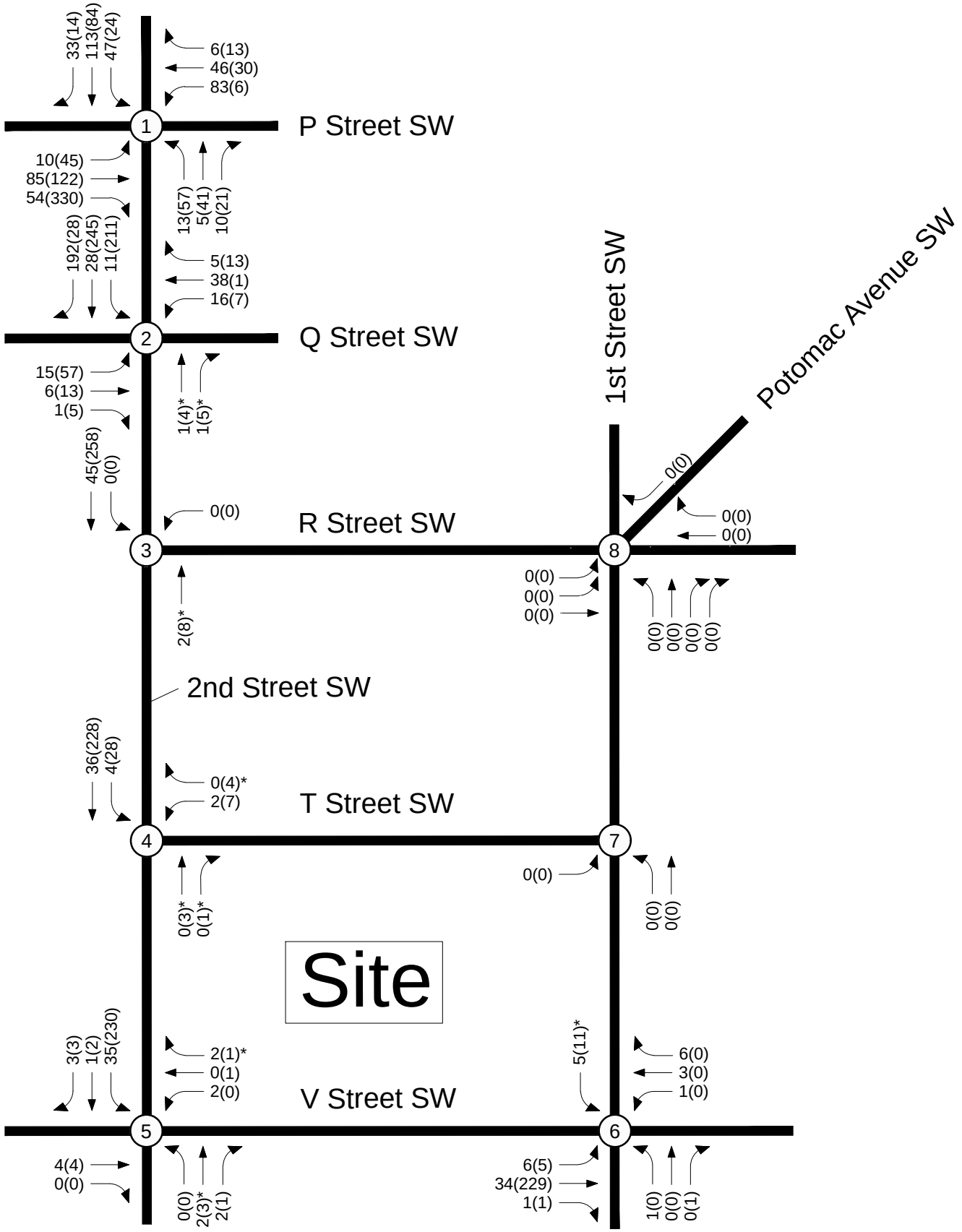
Represents One Travel Lane

Stop Sign

NORTH

100 V Street SW

Washington, DC



*Denotes a Prohibited Movement
Note: Intersections 7 and 8 were closed due to construction at the time counts were conducted.

Figure 7A
Existing Peak Hour Traffic Volumes with Regional Growth

000 (000) AM PEAK HOUR / PM PEAK HOUR

NORTH
100 V Street SW
Washington, DC

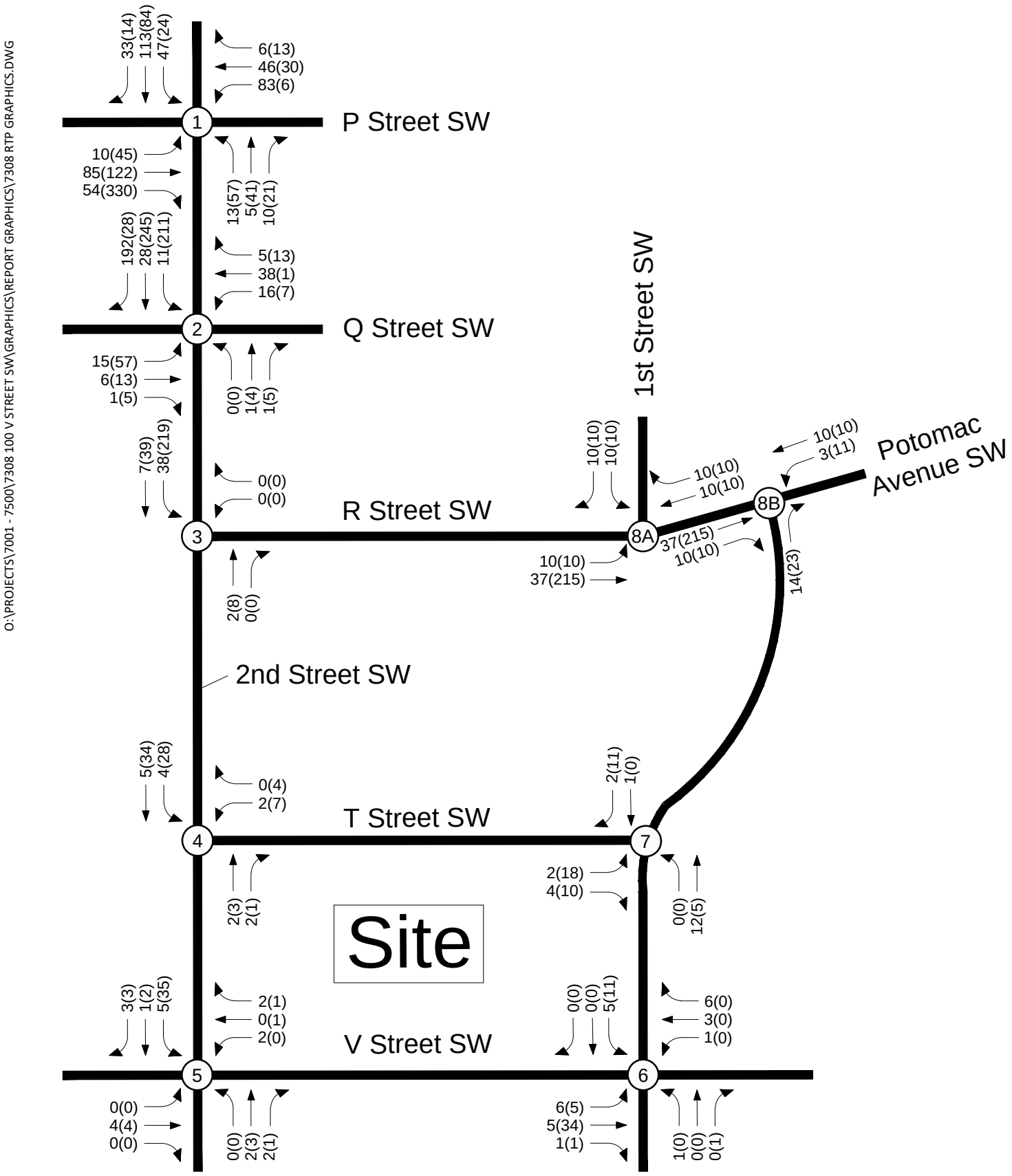


Figure 7B

Existing Peak Hour Traffic Volumes with Regional Growth (Rerouted)

000 (000) AM PEAK HOUR / PM PEAK HOUR

NORTH

100 V Street SW
Washington, DC

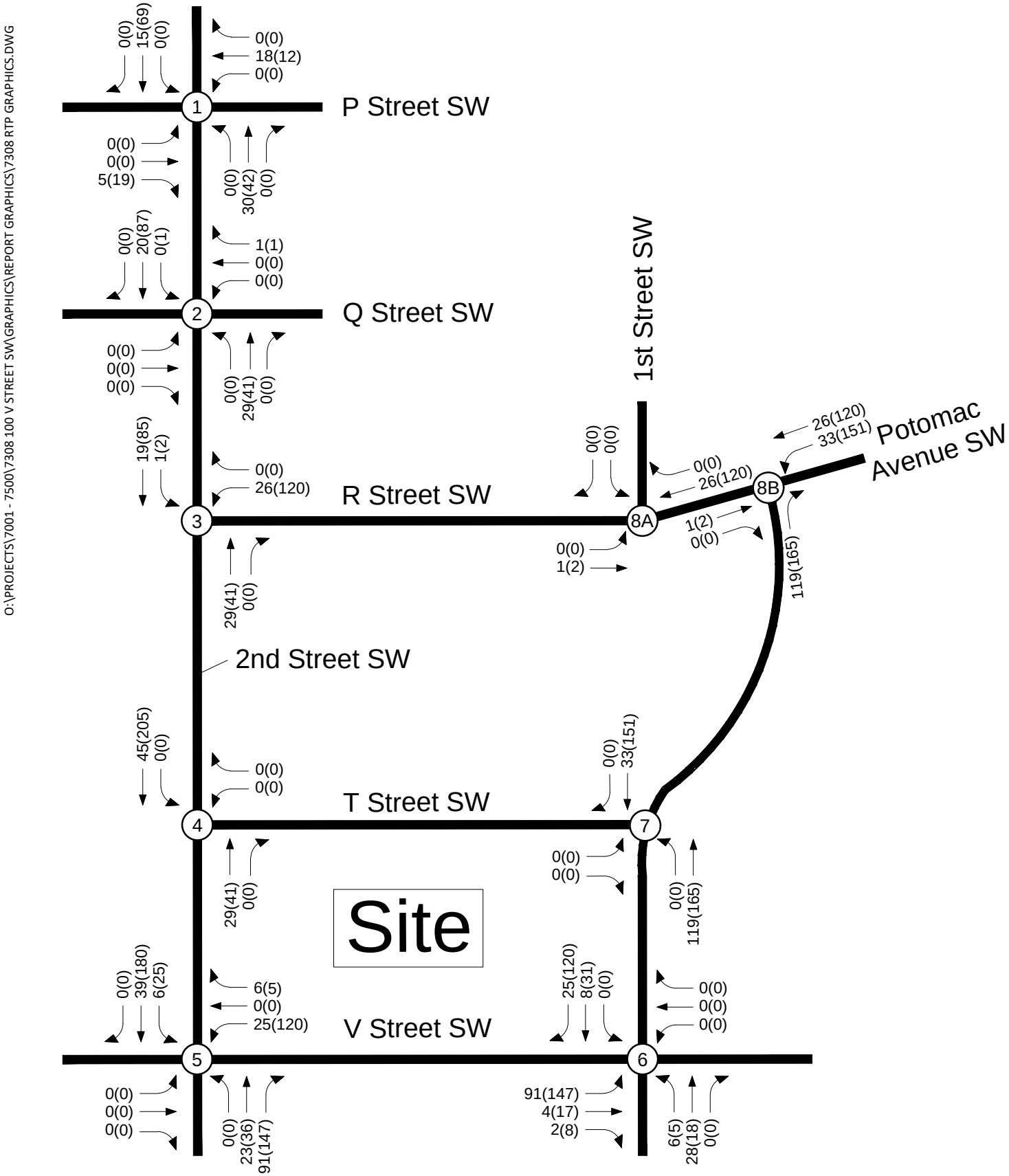


Figure 8
Pipeline Volumes

100 V Street SW
Washington, DC

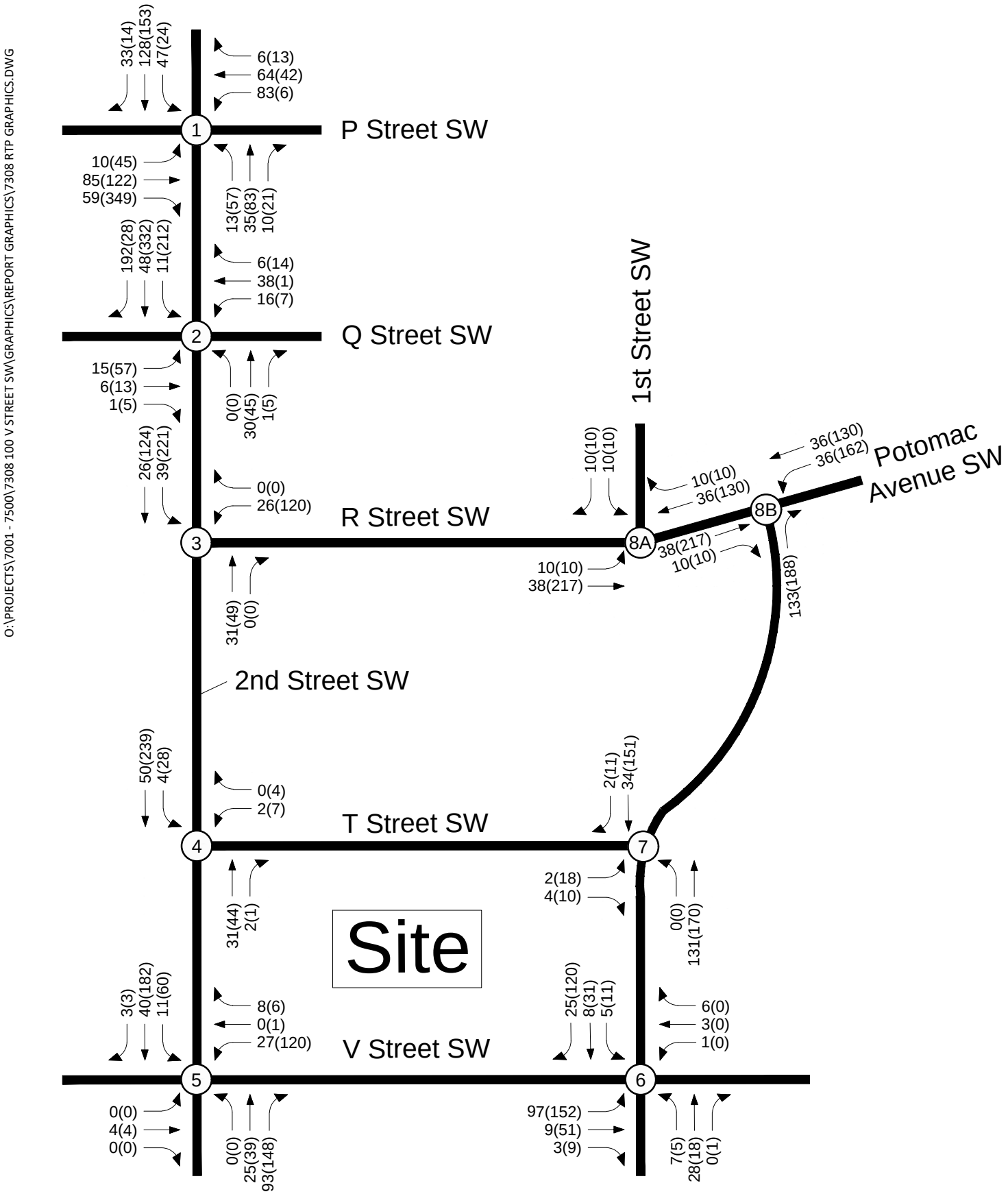


Figure 9

2023 Background Traffic Volumes

100 V Street SW
Washington, DC

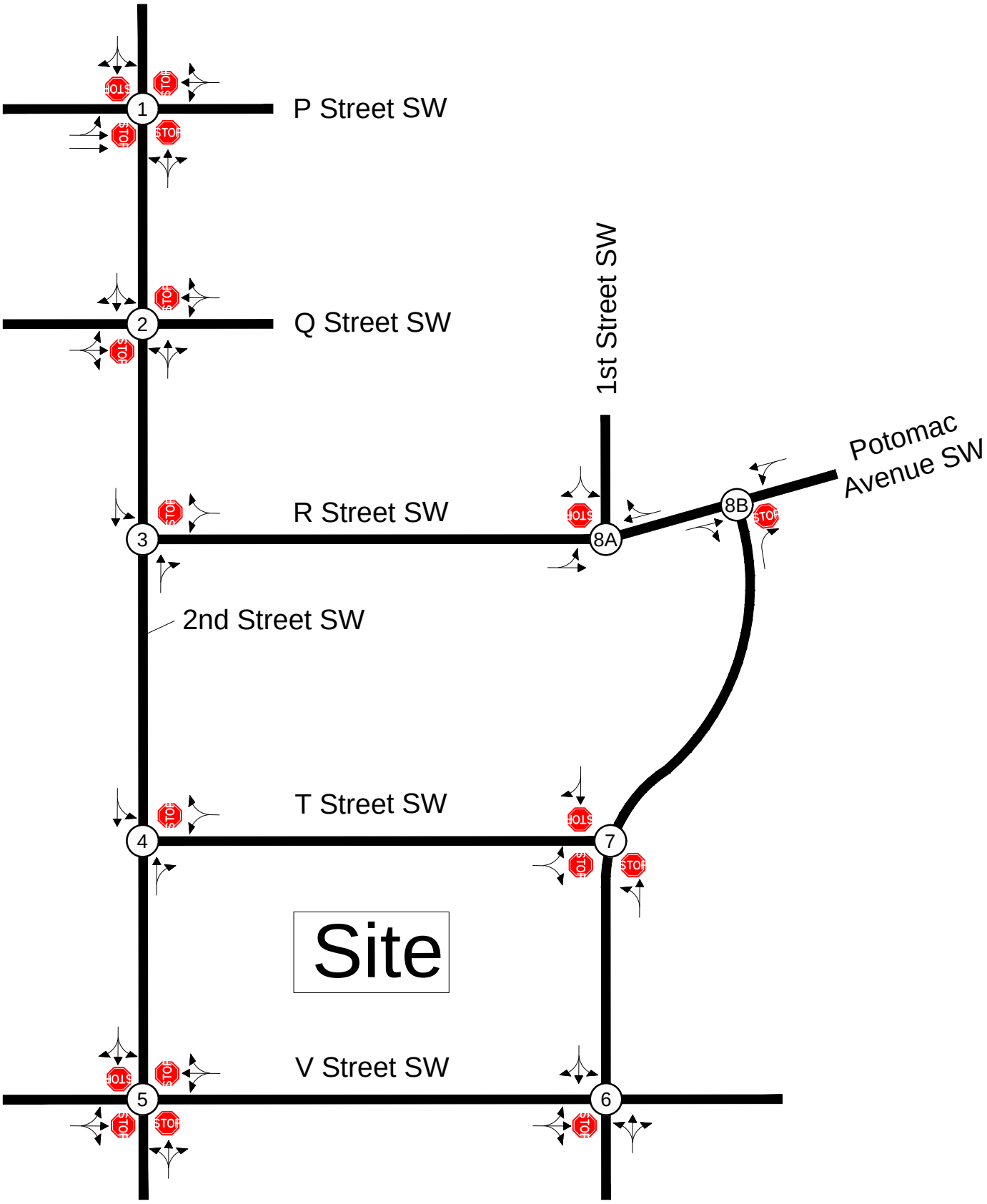


Figure 10
Background Lane Use and Traffic Control

Represents One Travel Lane
Stop Sign

NORTH
100 V Street SW
Washington, DC

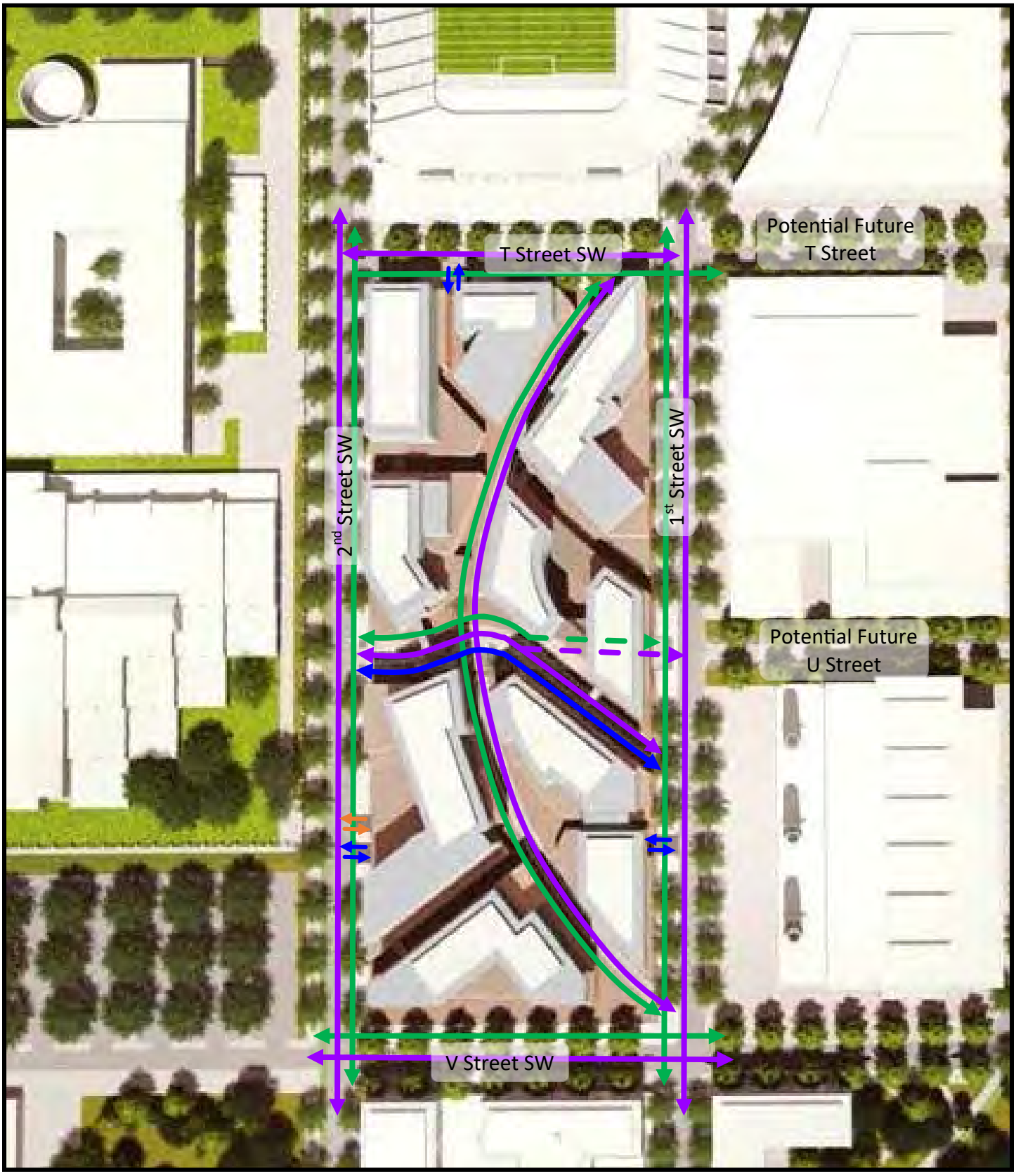
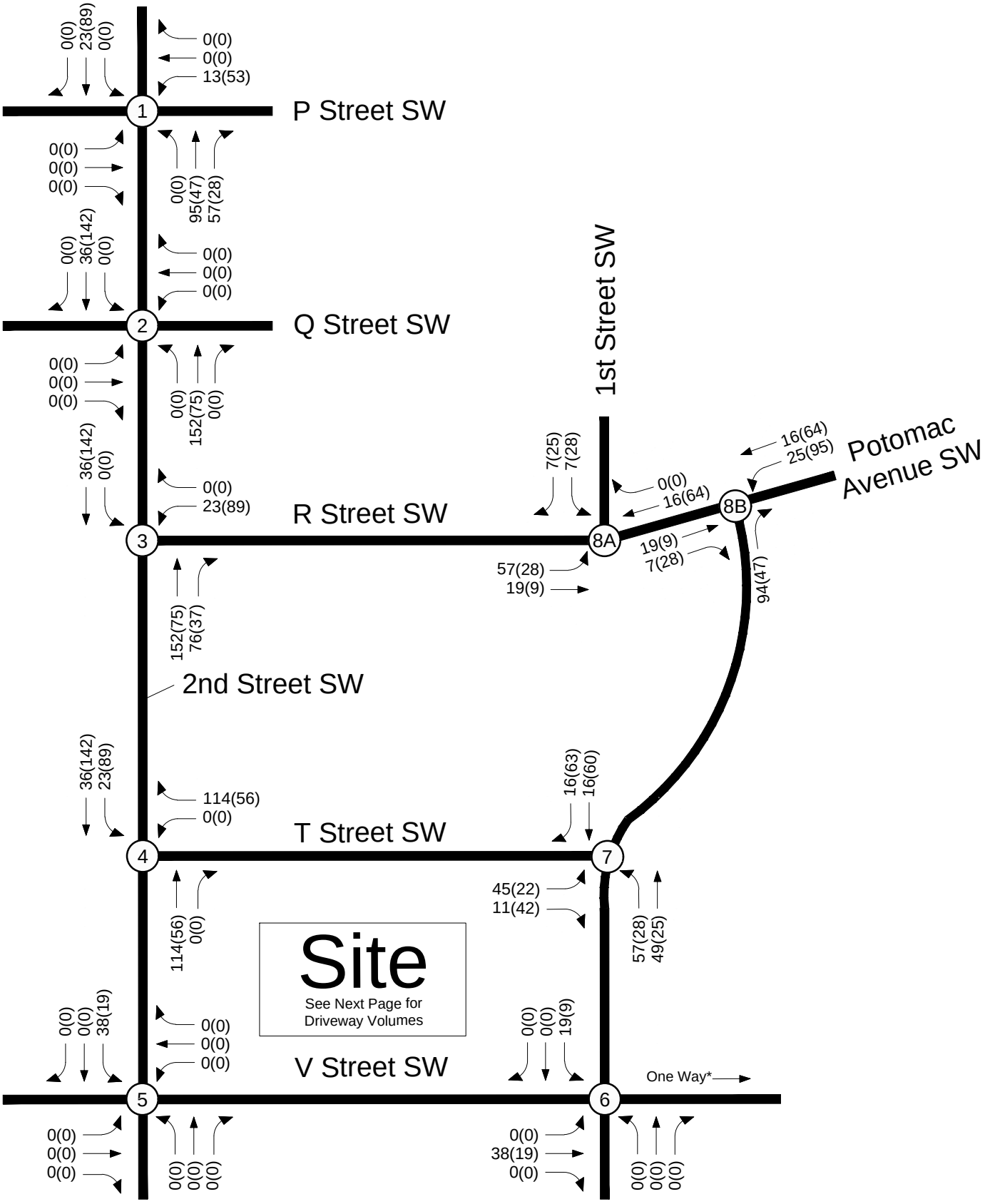


Figure 11
Proposed Site Circulation

Pedestrian Circulation
Bicycle Circulation
Vehicle Access/Egress
Loading Access/Egress

NORTH
100 V Street SW
Washington, DC



* Per DDOT, V Street east of 1st Street was analyzed as one-way eastbound.

Figure 12A
Residential Site Trips

000 (000) AM PEAK HOUR / PM PEAK HOUR

NORTH
100 V Street SW
Washington, DC

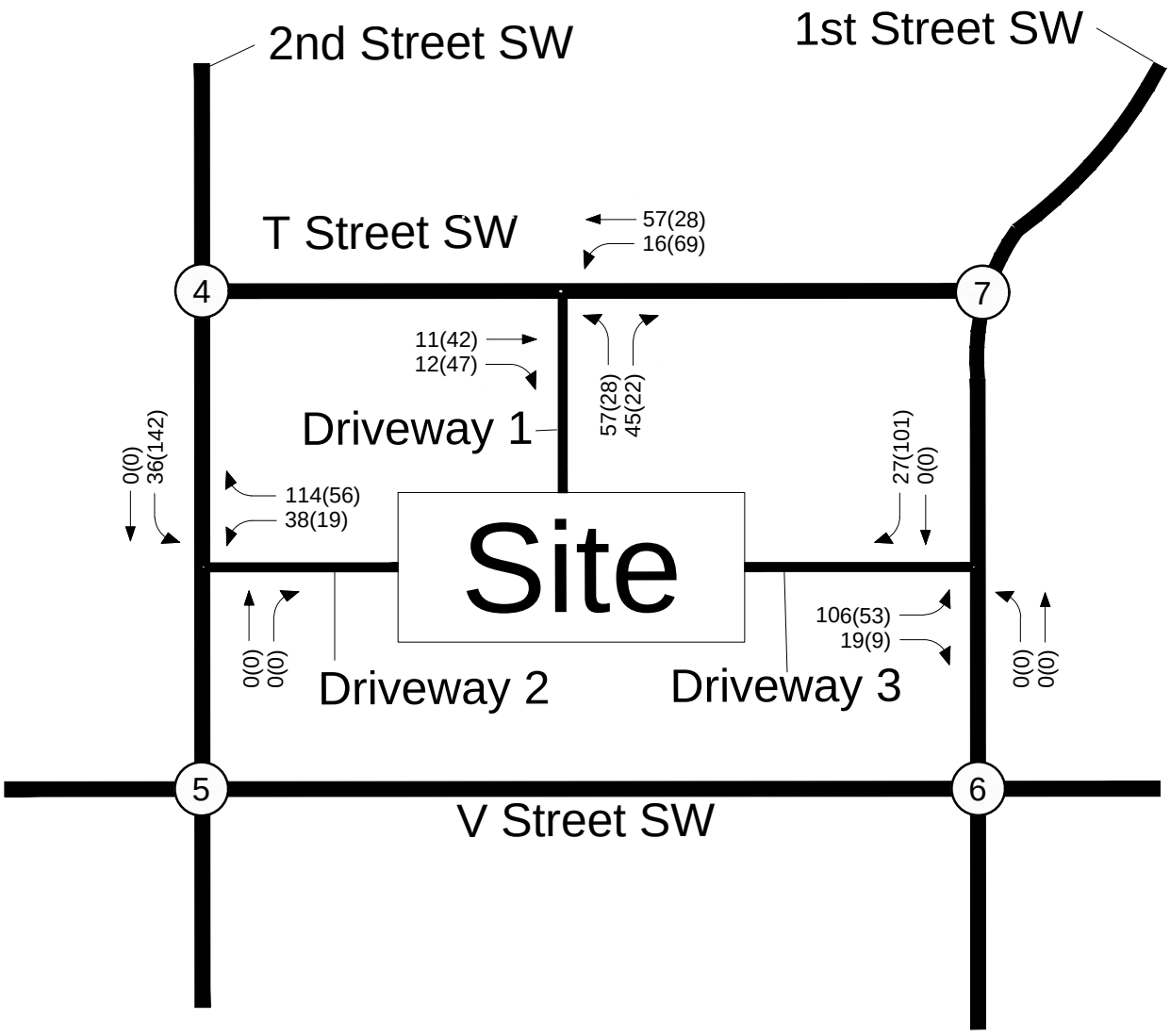
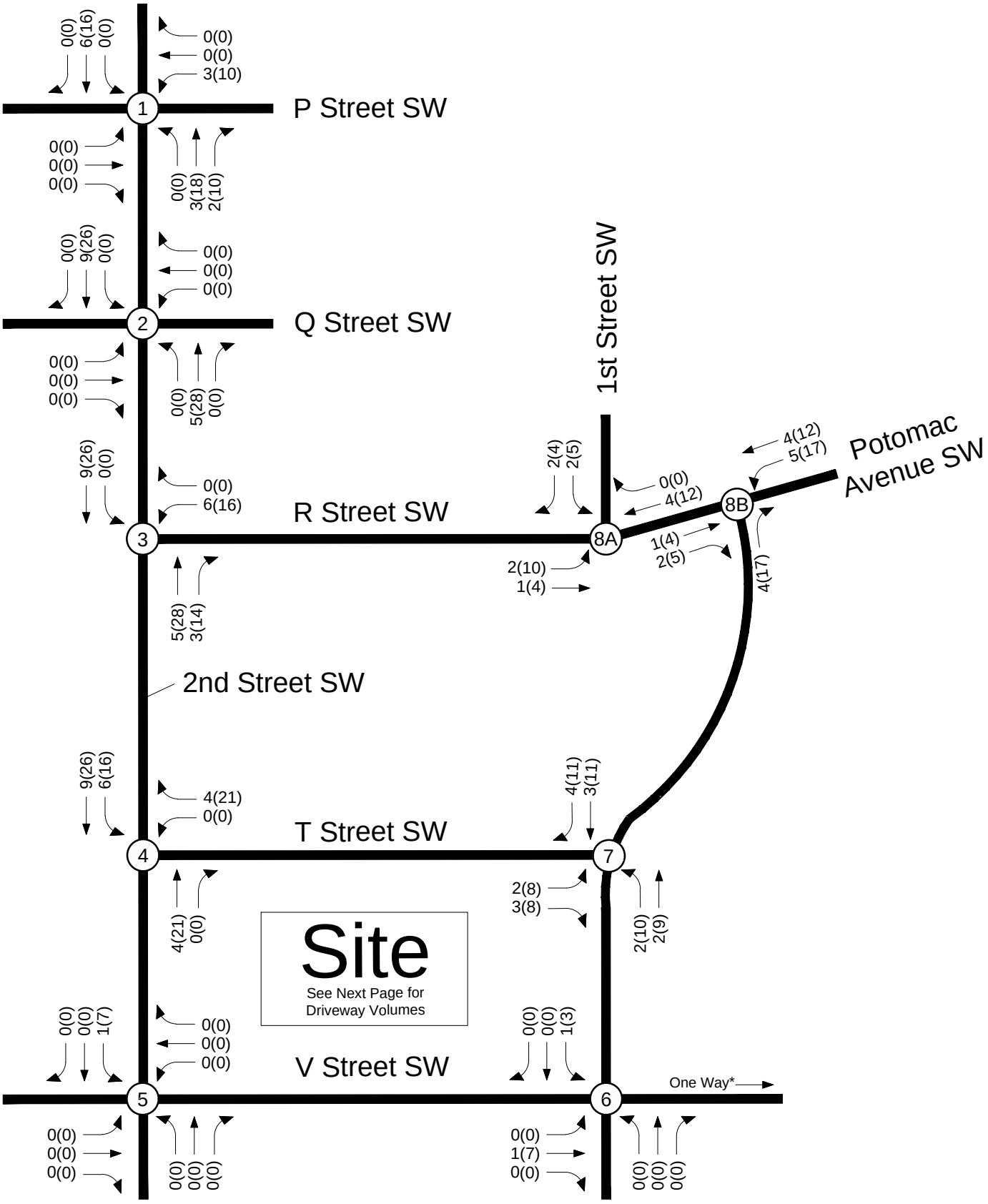


Figure 12A - Cont.
Residential Site Trips

AM PEAK HOUR
PM PEAK HOUR
000 (000)

NORTH
100 V Street SW
Washington, DC



* Per DDOT, V Street east of 1st Street was analyzed as one-way eastbound.

Figure 12B
Retail Site Trips

000 (000) — AM PEAK HOUR / PM PEAK HOUR

NORTH
100 V Street SW
Washington, DC

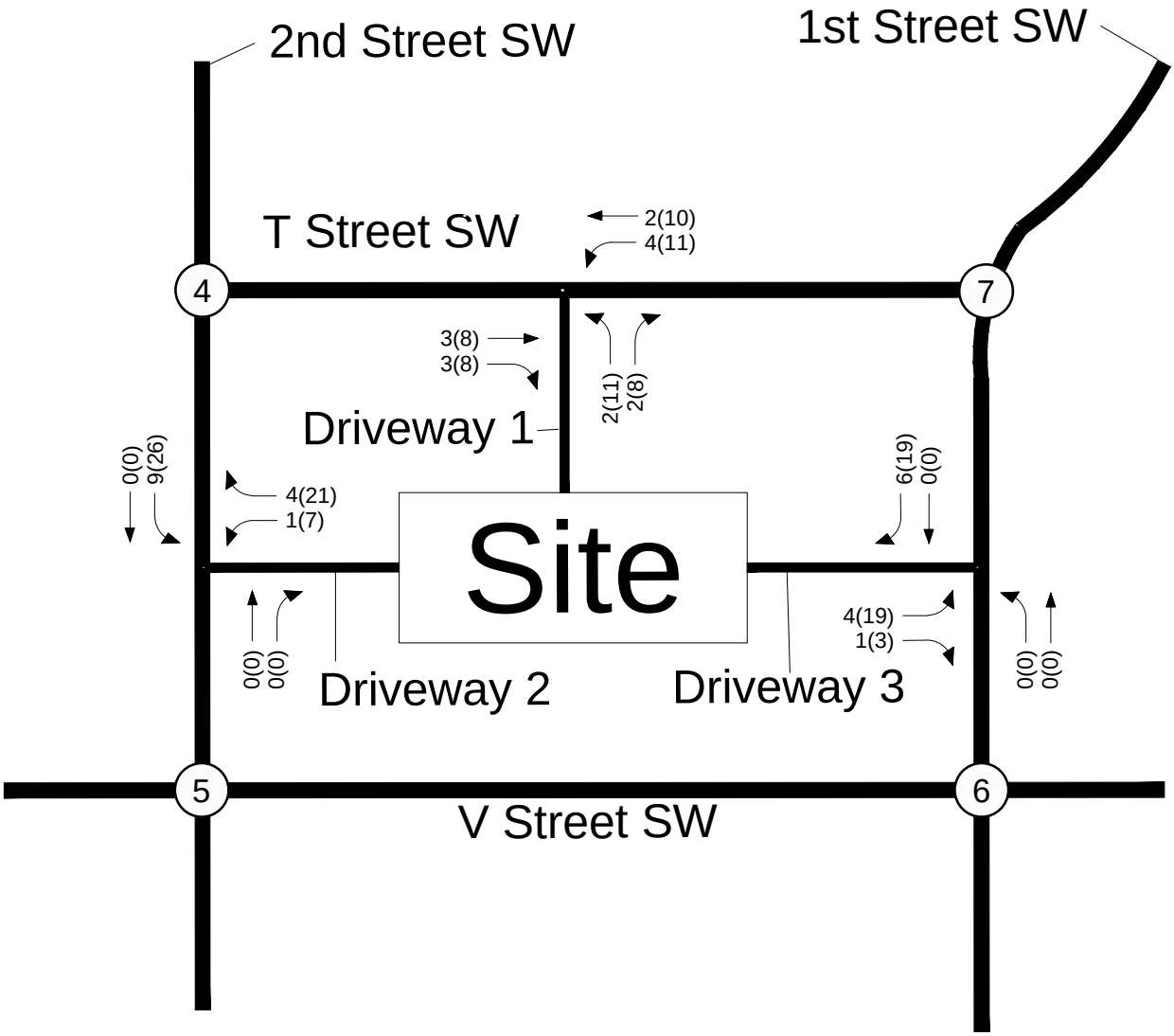
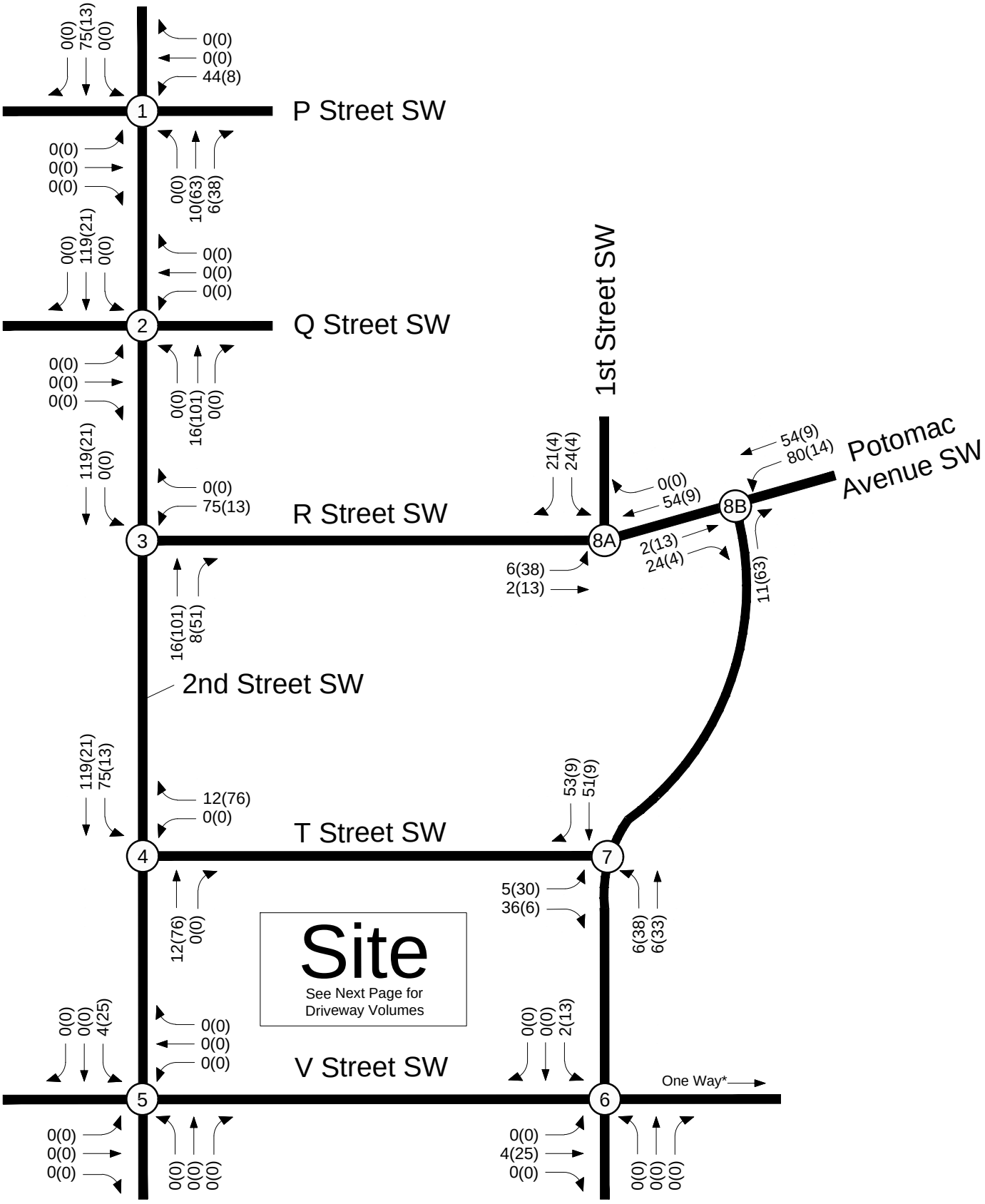


Figure 12B - Cont.
Retail Site Trips

000 (000) AM PEAK HOUR / PM PEAK HOUR

NORTH
100 V Street SW
Washington, DC



* Per DDOT, V Street east of 1st Street was analyzed as one-way eastbound.

Figure 12C
Office Site Trips

000 (000) AM PEAK HOUR / PM PEAK HOUR

NORTH
100 V Street SW
Washington, DC

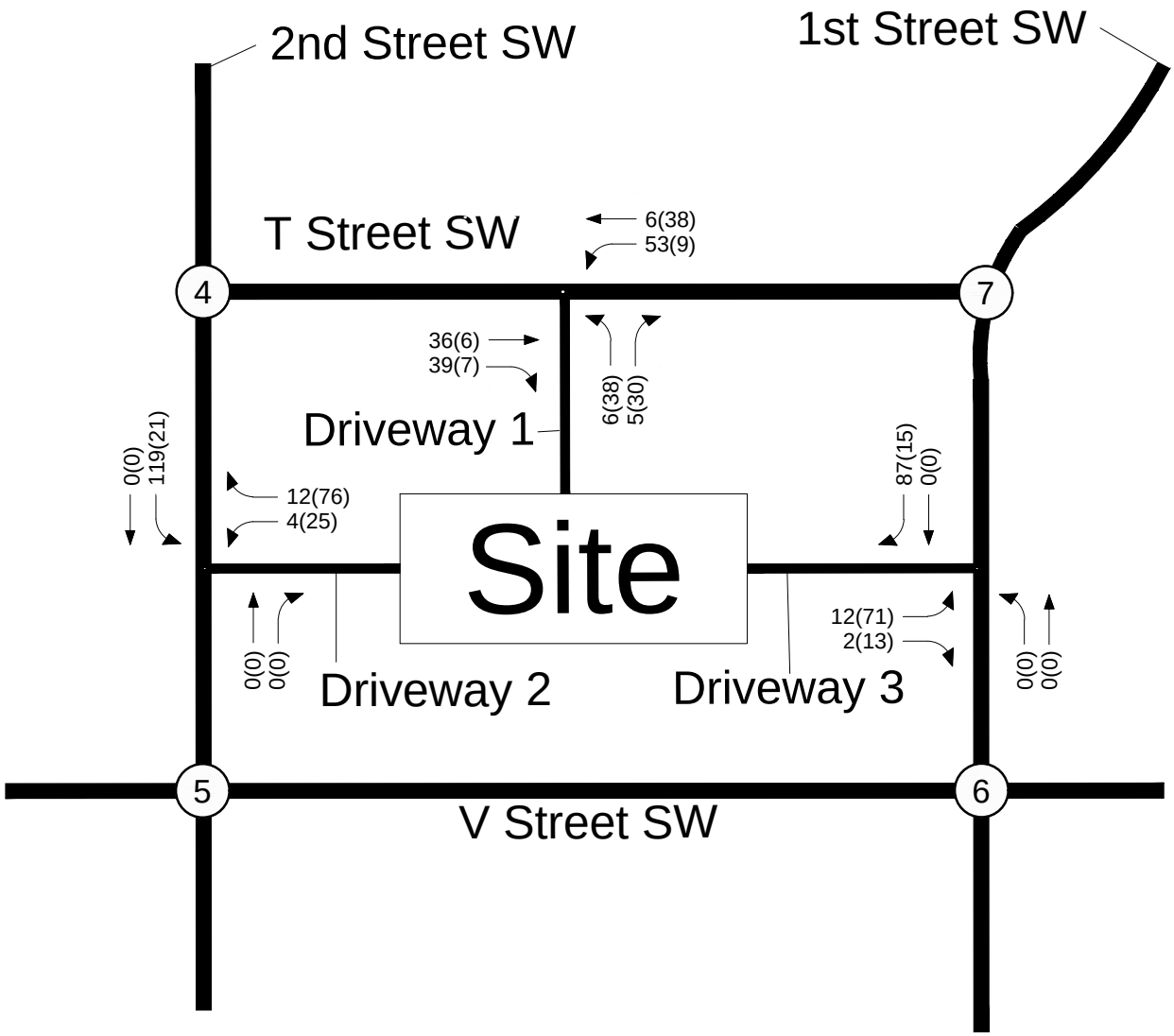
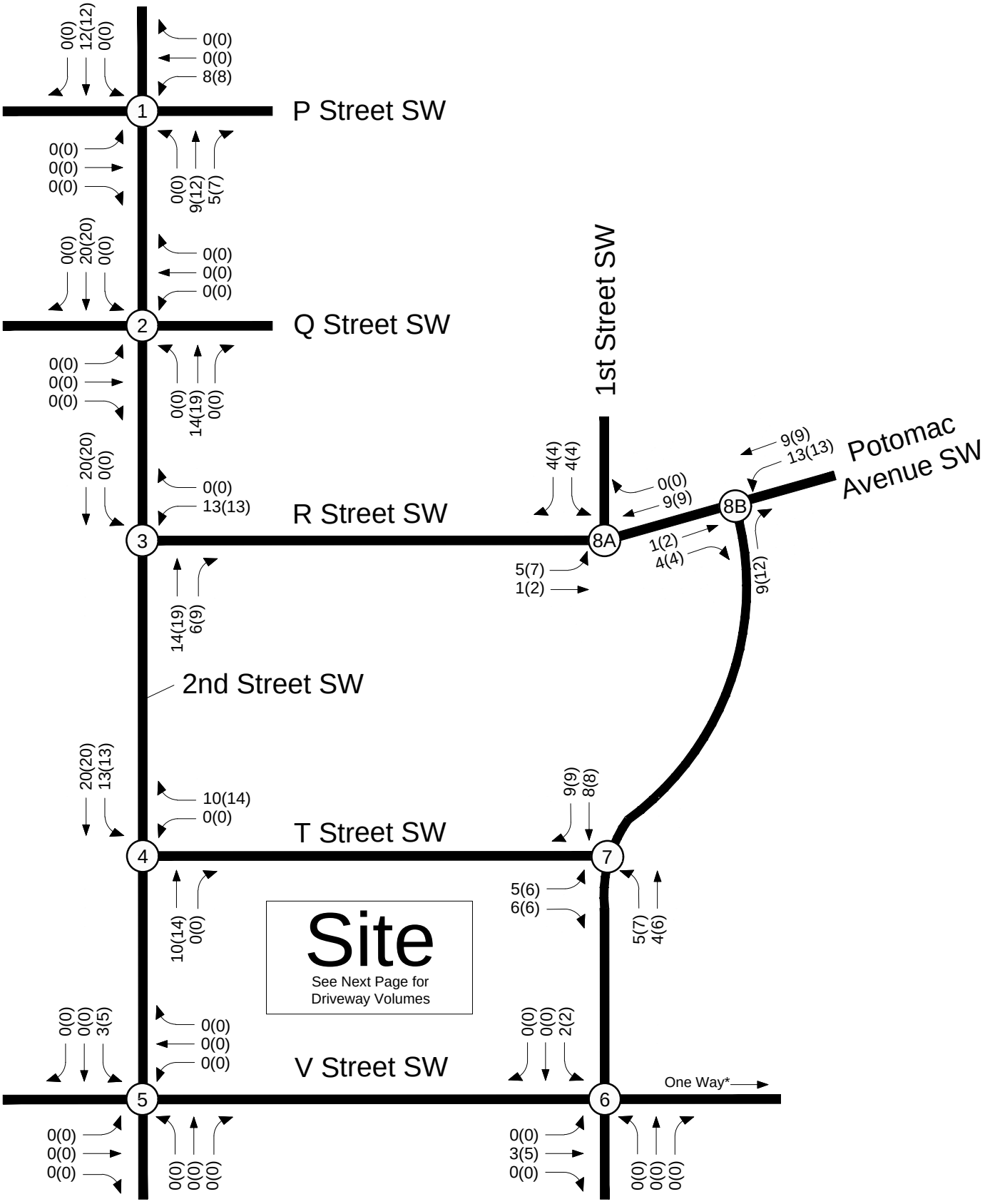


Figure 12C - Cont.
Office Site Trips

AM PEAK HOUR
PM PEAK HOUR
000 (000)

NORTH
100 V Street SW
Washington, DC



* Per DDOT, V Street east of 1st Street was analyzed as one-way eastbound.

Figure 12D
Hotel Site Trips

000 (000) AM PEAK HOUR / PM PEAK HOUR

NORTH
100 V Street SW
Washington, DC

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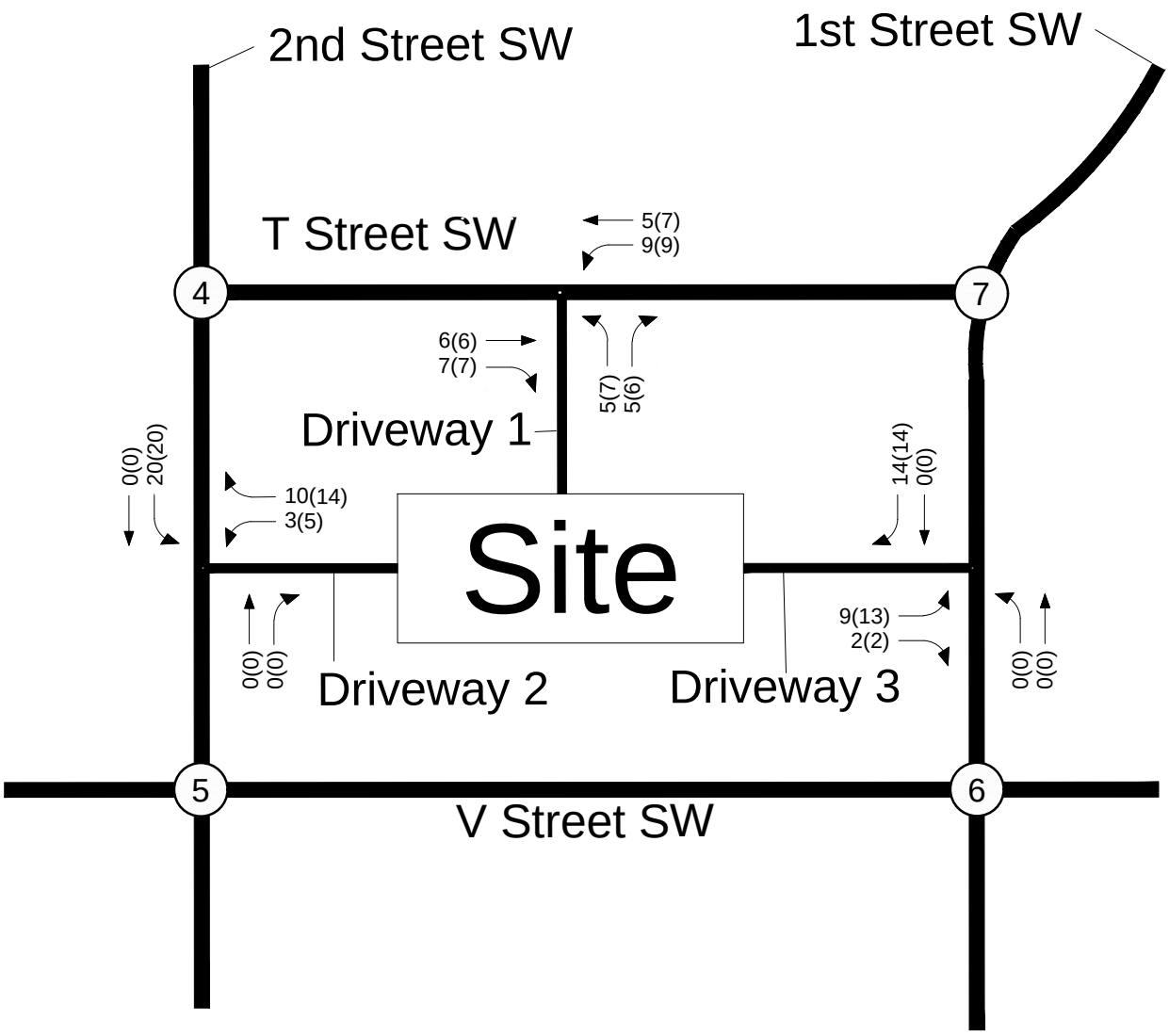
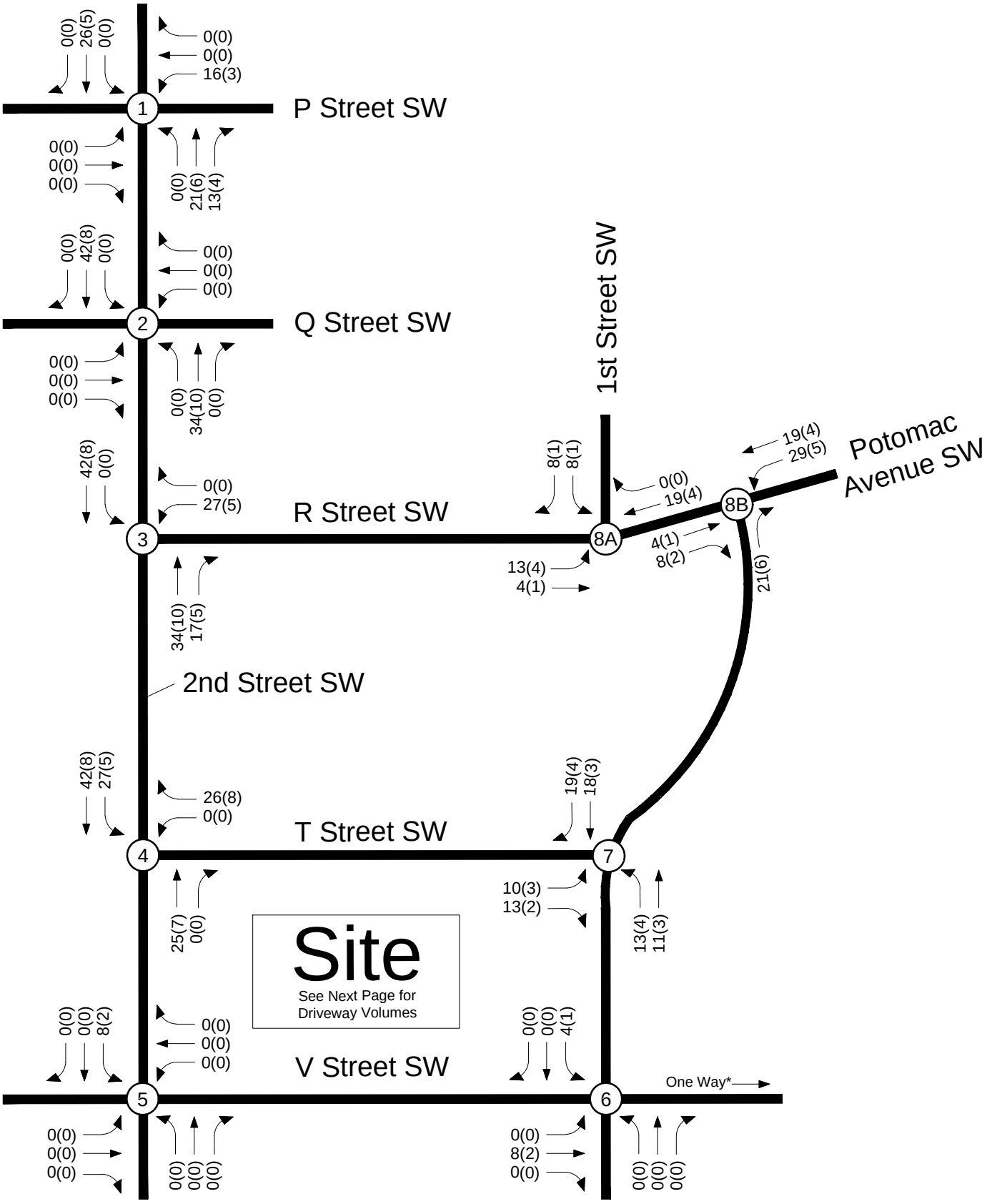


Figure 12D - Cont.
Hotel Site Trips

AM PEAK HOUR
PM PEAK HOUR
000 (000)

NORTH
100 V Street SW
Washington, DC



* Per DDOT, V Street east of 1st Street was analyzed as one-way eastbound.

Figure 12E

Elementary School Site Trips

000 (000) AM PEAK HOUR / PM PEAK HOUR

NORTH

100 V Street SW
Washington, DC

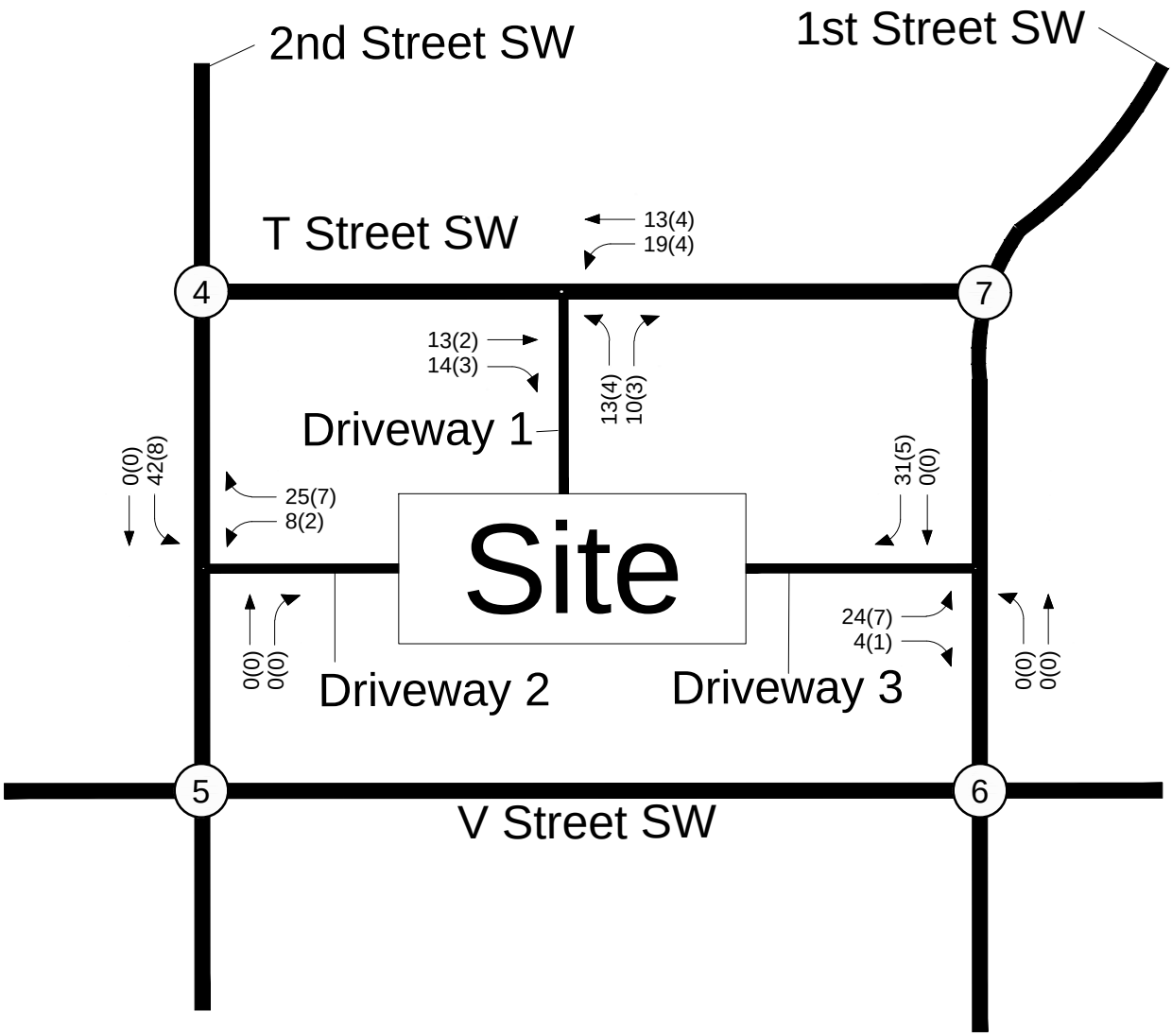
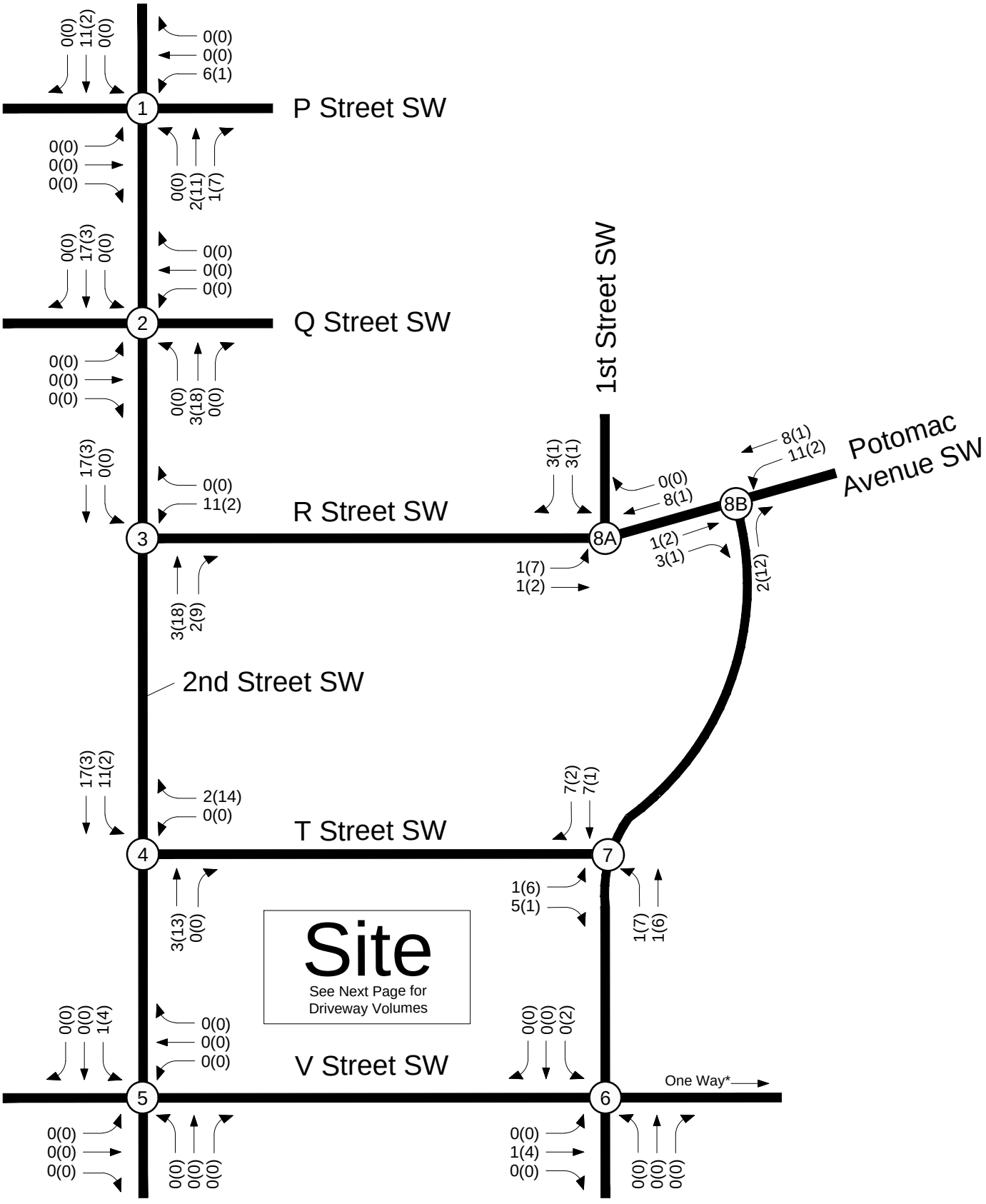


Figure 12E - Cont.
Elementary School Site Trips

AM PEAK HOUR
PM PEAK HOUR
000 (000)

NORTH
100 V Street SW
Washington, DC



* Per DDOT, V Street east of 1st Street was analyzed as one-way eastbound.

Figure 12F

DC Central Kitchen Site Trips

000 (000) AM PEAK HOUR / PM PEAK HOUR

NORTH

100 V Street SW
Washington, DC

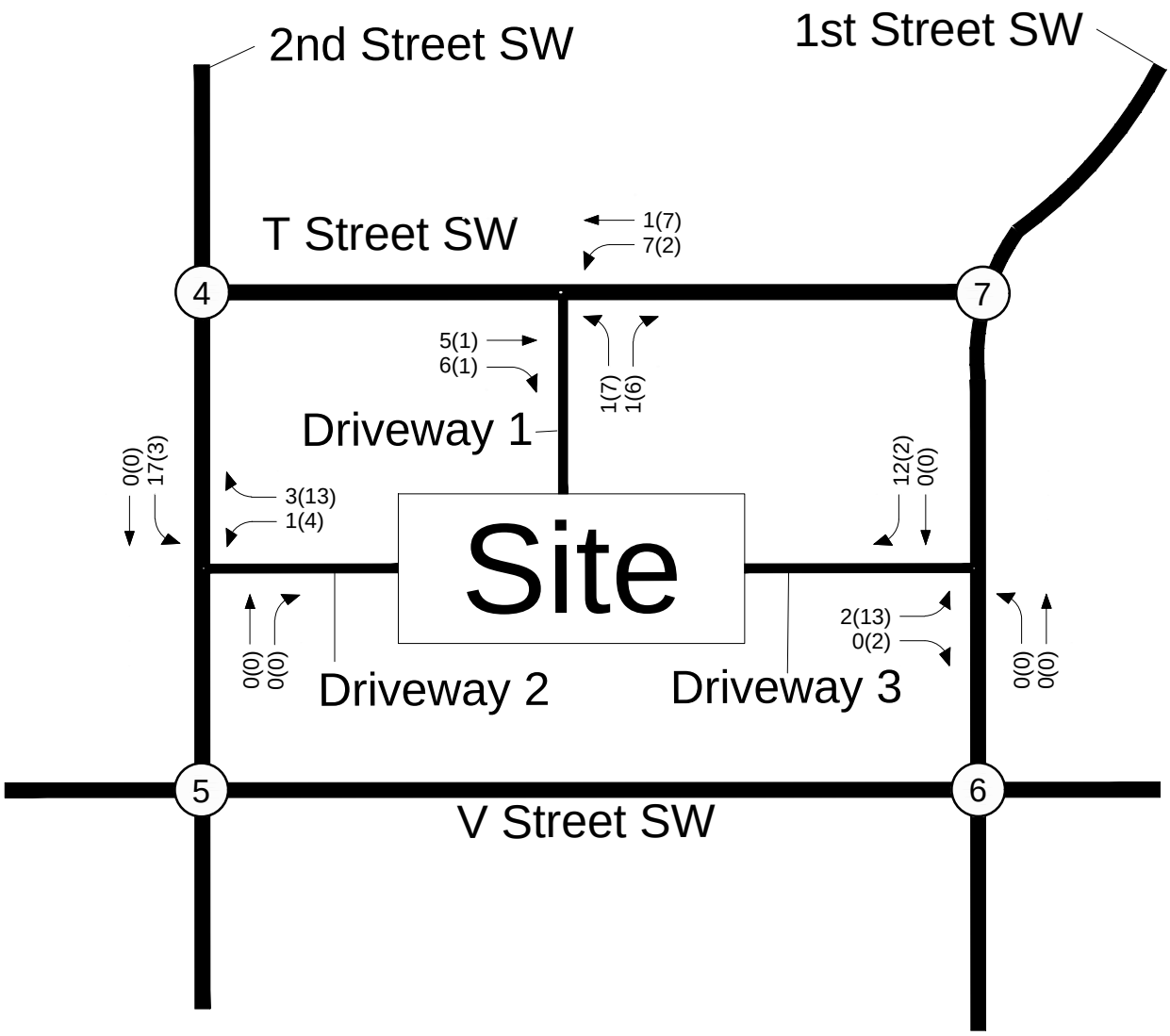
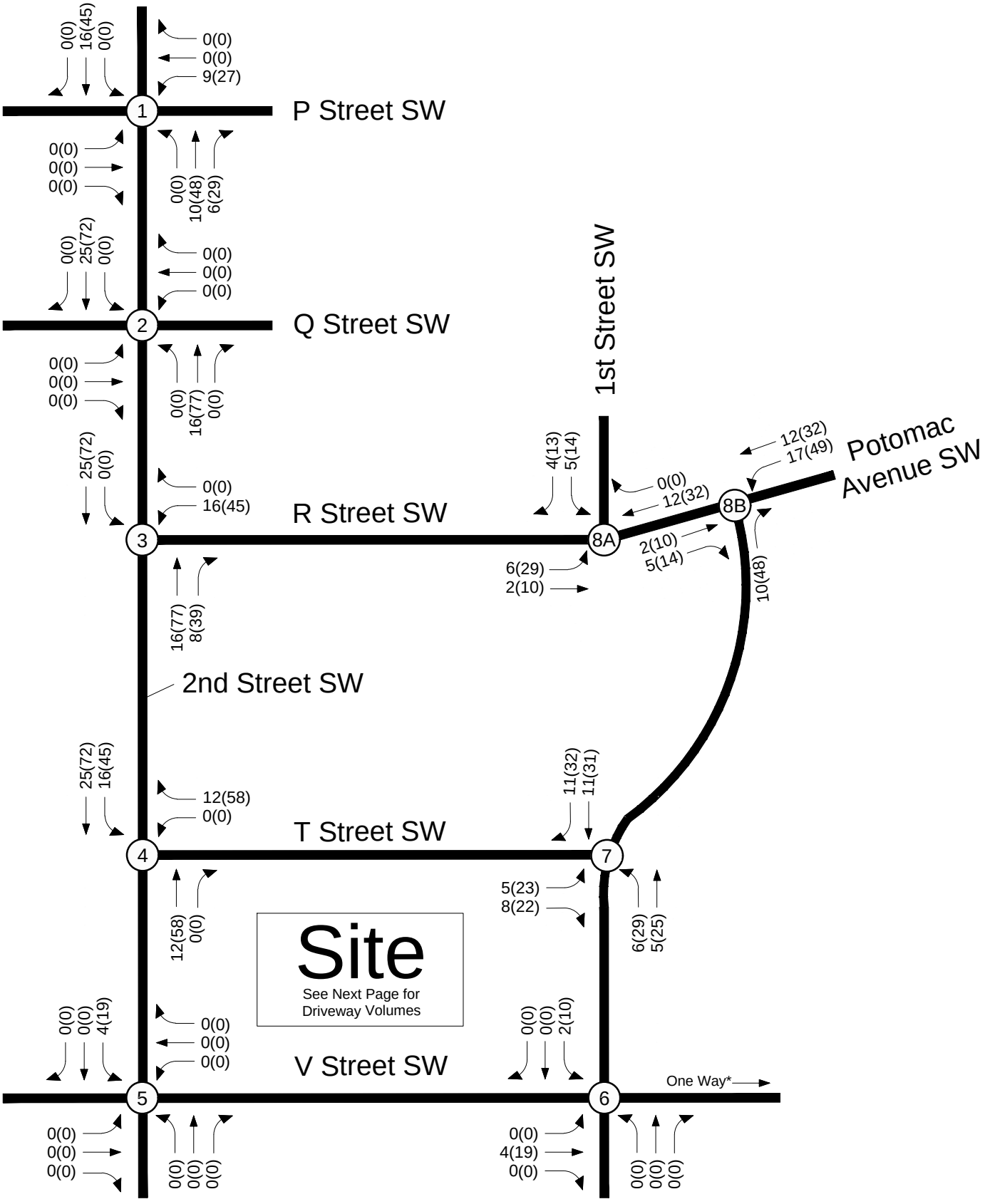


Figure 12F - Cont.
DC Central Kitchen Site Trips

AM PEAK HOUR
PM PEAK HOUR
000 (000)

NORTH
100 V Street SW
Washington, DC



* Per DDOT, V Street east of 1st Street was analyzed as one-way eastbound.

Figure 12G
Public Parking Site Trips

000 (000) AM PEAK HOUR / PM PEAK HOUR

NORTH
100 V Street SW
Washington, DC

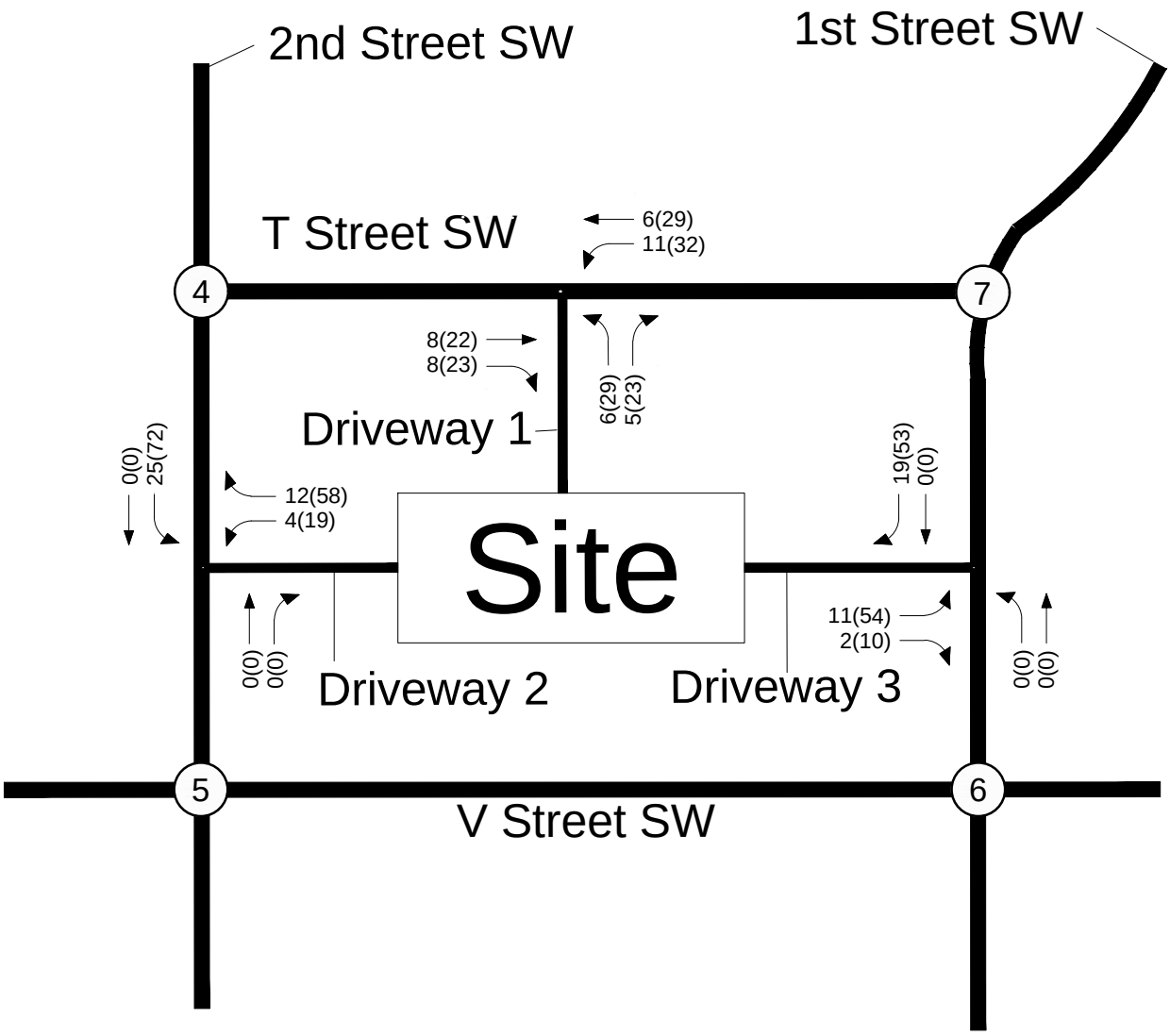
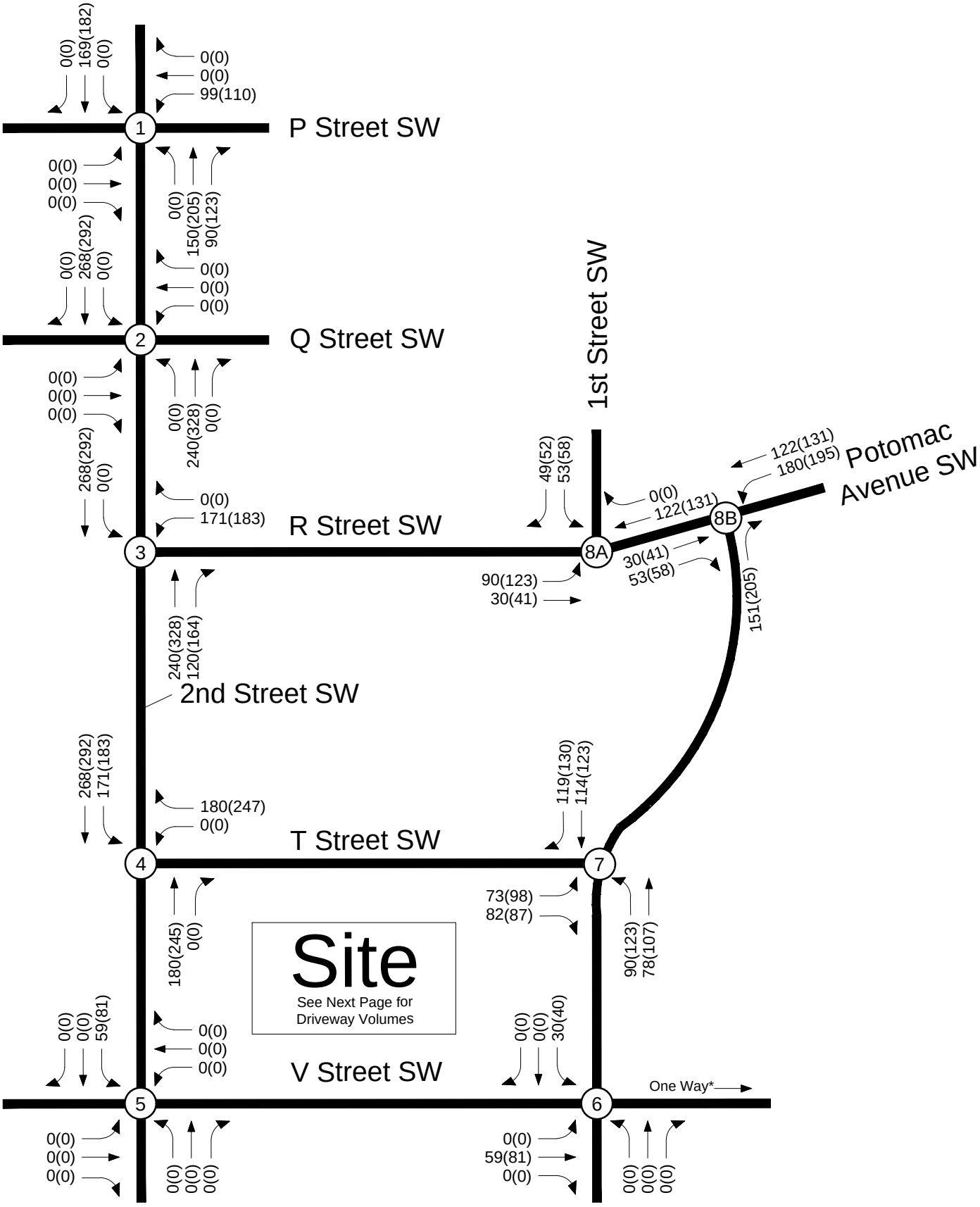


Figure 12G - Cont.
Public Parking Site Trips

AM PEAK HOUR
PM PEAK HOUR
000 (000)

NORTH
100 V Street SW
Washington, DC



* Per DDOT, V Street east of 1st Street was analyzed as one-way eastbound.

Figure 12H
Total Site Trips

000 (000) AM PEAK HOUR / PM PEAK HOUR

NORTH

100 V Street SW
Washington, DC

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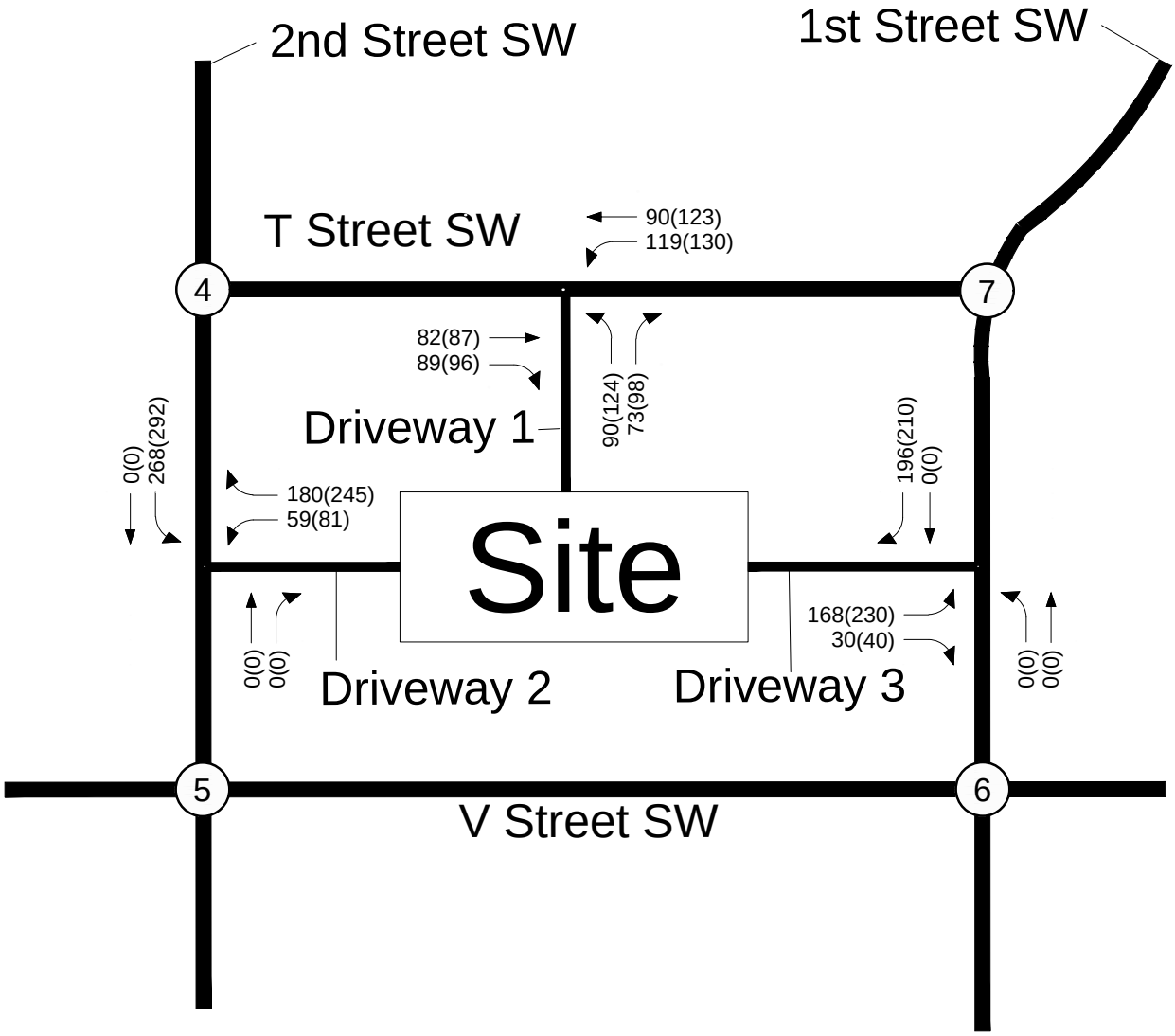
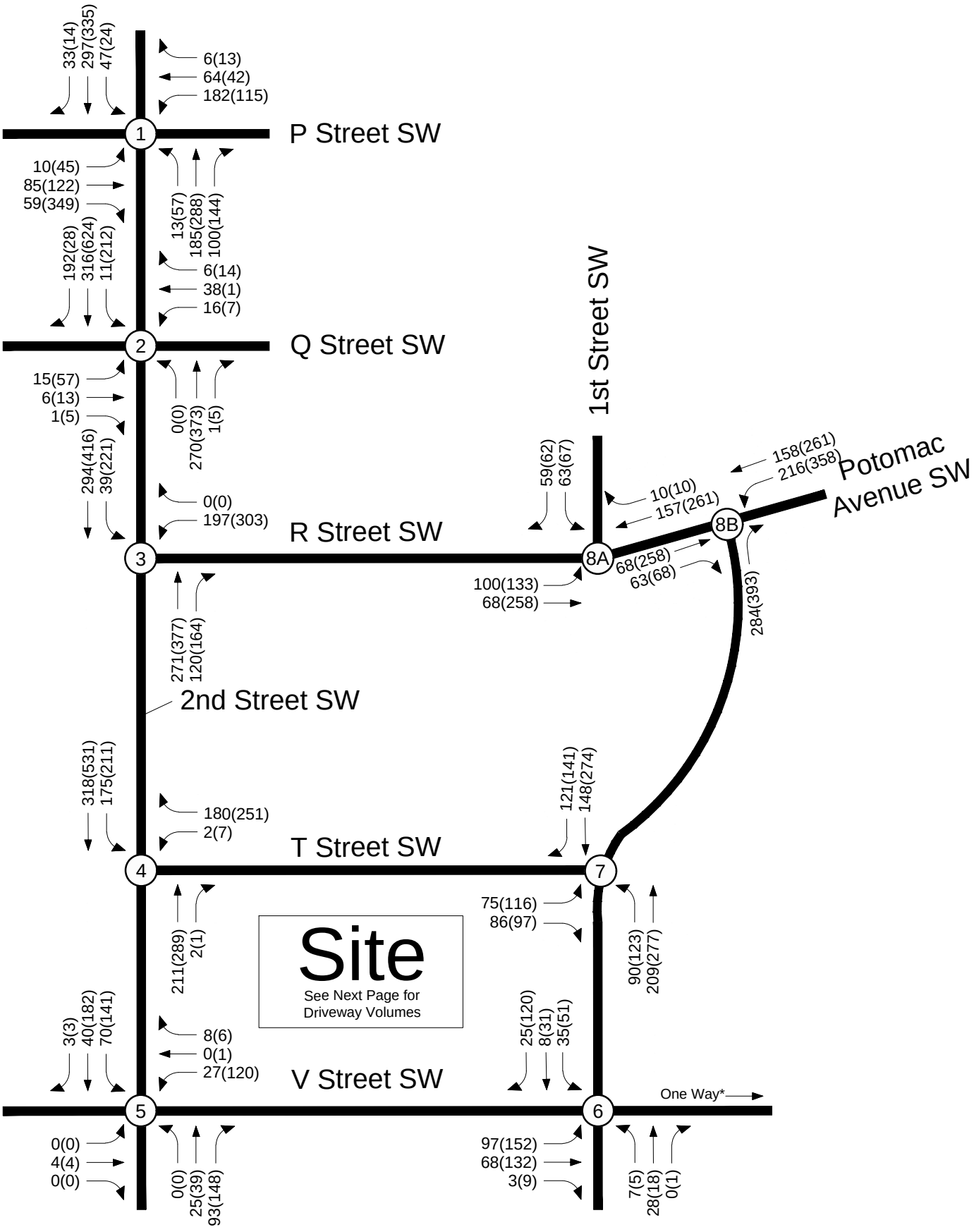


Figure 12H - Cont.
Total Site Trips

AM PEAK HOUR
PM PEAK HOUR
000 (000)

NORTH
100 V Street SW
Washington, DC



* Per DDOT, V Street east of 1st Street was analyzed as one-way eastbound.

Figure 13

Total Future Traffic Volumes

000 (000) AM PEAK HOUR / PM PEAK HOUR

NORTH

100 V Street SW
Washington, DC

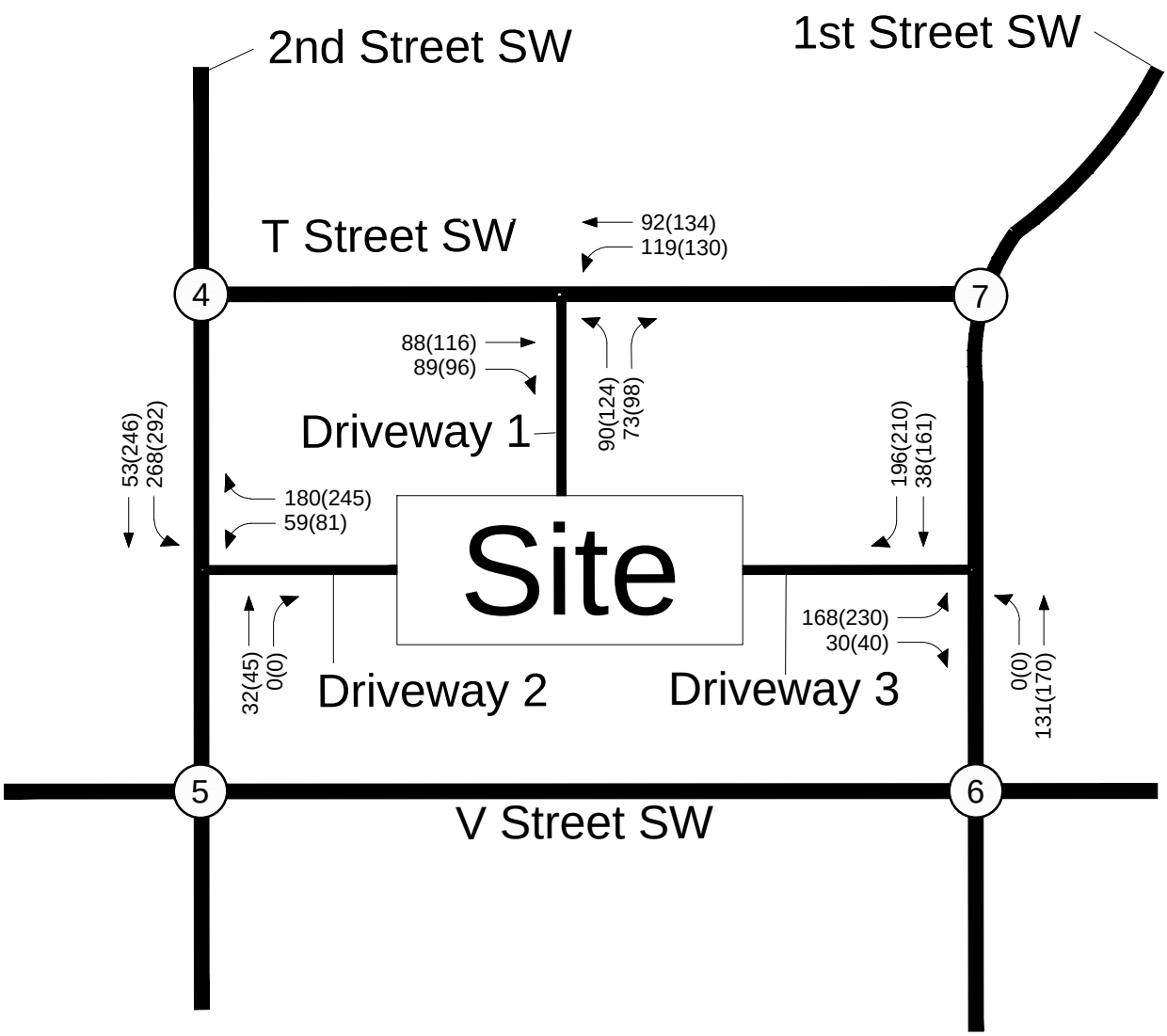


Figure 13 - Cont.
Total Future Traffic Volumes

AM PEAK HOUR
PM PEAK HOUR
000 (000)

NORTH
100 V Street SW
Washington, DC

EXHIBIT I

WELLS + ASSOCIATES

MEMORANDUM

1110 Bonifant Street
Suite 210,
Silver Spring, MD 20910
301-448-1333
WellsandAssociates.com

TO: Andrew Christopher, Akridge
Kristin Connall, Akridge

FROM: Jami L. Milanovich, PE

RE: 100 V Street SW
Trip Generation Assessment

DATE: October 2, 2020

In February 2018, a Comprehensive Transportation Review (CTR) was conducted for the Applicant's proposed development of 100 V Street SW (a copy of the CTR is attached). The study was conducted at the request of DDOT in conjunction with the Applicant's request for conceptual approval of proposed curb cuts through the Public Space Committee. The approval was granted on February 22, 2018.

At the time the CTR was conducted, the proposed development included the following components:

- 1,563 apartment dwelling units,
- 452 condominium dwelling units,
- 250,580 SF of office space,
- a 201-key hotel,
- 41,221 SF of retail space,
- a 45,794 SF elementary school,
- 39,943 SF of food preparation and education space, and
- 1,690 parking spaces in a two level below grade garage.

Over the intervening years, plans for the project have been advanced. While the overall development plan, including the number of buildings, site area, and place-making elements have remained unchanged since 2018, the specific uses have been refined to reflect current and anticipated market conditions. The plans now include the following elements:

- 2,097 apartment dwelling units,
- 106,654 SF of office space,
- 209,984 SF of hotel space (423 keys),
- 63,529 SF of retail space, and

- 1,332 parking spaces.

In order to assess the validity of the CTR conducted in 2018, a trip generation analysis was conducted for the current development program. The trip generation estimates were then compared to those used in the February 2018 CTR.

In order to provide a like comparison, the same trip generation methodology used for the 2018 CTR was used to estimate trips for the current development program. The trip generation analysis is summarized in Table 1.

Table 1
Site Trip Generation Summary

Land Use		AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
2,097 DU Apartment (LUC 220)	Total Trips	206	825	1031	761	410	1171
	Non-auto Trips	*103*	*413*	*516*	*381*	*205*	*586*
	Transit	*57*	*228*	*285*	*211*	*114*	*325*
	Bicycle	*6*	*25*	*31*	*23*	*12*	*35*
	Pedestrian	*14*	*55*	*69*	*51*	*28*	*79*
	Vehicle Trips	103	412	515	380	205	585
106,654 SF Office (LUC 710)	Total Trips	177	24	201	34	164	198
	Non-auto Trips	*27*	*4*	31	*5*	*25*	30
	Transit	*39*	*5*	*44*	*7*	*33*	*40*
	Bicycle	*7*	*1*	*8*	*1*	*6*	*7*
	Pedestrian	*7*	*1*	*8*	*1*	*6*	*7*
	Vehicle Trips	150	20	170	29	139	168
63,529 SF Retail (LUC 820)	Total Trips	73	45	118	212	230	442
	Non-auto Trips	*44*	*27*	71	*127*	*138*	265
	Transit	*8*	*5*	*13*	*24*	*26*	*50*
	Bicycle	*6*	*4*	*10*	*16*	*17*	*33*
	Pedestrian	*20*	*12*	*32*	*55*	*60*	*115*
	Vehicle Trips	29	18	47	85	92	177
423 keys Hotel (LUC 310)	Total Trips	132	92	224	130	124	254
	Non-auto Trips	*26*	*18*	*44*	*26*	*25*	*51*
	Transit	*6*	*4*	*10*	*6*	*6*	*12*
	Bicycle	-	-	-	-	-	-
	Pedestrian	*7*	*5*	*12*	*6*	*6*	*12*
	Vehicle Trips	106	74	180	104	99	203

Table 12 (continued)
Site Trip Generation Summary

Land Use		AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Sub-Total Proposed Development	Total Trips	588	986	1,574	1,137	928	2,065
	Non-auto Trips	*200*	*462*	*662*	*539*	*393*	*932*
	Transit	*110*	*242*	*352*	*248*	*179*	*427*
	Bicycle	*19*	*30*	*49*	*40*	*35*	*75*
	Pedestrian	*48*	*73*	*121*	*113*	*100*	*213*
	Vehicle Trips	388	524	912	598	535	1,133
146 Public Parking Spaces	Total Trips	28	17	45	79	85	164
	Non-auto Trips	0	0	0	0	0	0
	Transit	0	0	0	0	0	0
	Bicycle	0	0	0	0	0	0
	Pedestrian	0	0	0	0	0	0
	Vehicle Trips	28	17	45	79	85	164
Total Proposed Development with Parking	**Total Trips**	**616**	**1,003**	**1,619**	**1,216**	**1,013**	**2,229**
	Non-auto Trips	***200***	***462***	***662***	***539***	***393***	***932***
	Transit	***110***	***242***	***352***	***248***	***179***	***427***
	Bicycle	***19***	***30***	***49***	***40***	***35***	***75***
	Pedestrian	***48***	***73***	***121***	***113***	***100***	***213***
	Vehicle Trips	**416**	**541**	**957**	**677**	**620**	**1,297**

Notes:
1. Trips generated using ITE Trip Generation Manual, 9th Edition.
2. Non-auto modes splits were developed in consultation with DDOT during the scoping process for the 2018 CTR.
3. Per DDOT'S request, trips generated by "public" parking spaces were conservatively included (spaces that the project would not necessarily otherwise be generating trips for directly). For purposes of the analysis, a portion (58 percent) of the parking spaces not categorized as reserved residential spaces or assigned to another land use were considered since not all of the spaces will be used during the weekday. The peak arrival and departure ratios for LUC 820 from the ITE Traffic Engineering Handbook, 6th Edition, were used for to determine the AM and PM peak hour trip generation for 97 "public" parking spaces

As shown in Table 2, the proposed development of 100 V Street SW is now expected to generate 316 fewer AM peak hour vehicle trips and 249 fewer PM peak hour vehicle trips than the development program analyzed in the 2018 CTR. The decrease in trips was driven by several factors:

- The office space decreased by 57 percent.
- The food preparation and education space is no longer proposed for this site.
- A school is no longer being contemplated for the site.
- The parking has been reduced by 21 percent.

Table 2
2018 vs. 2019 Trip Generation Comparison

Development Program	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
2018	672	600	1272	728	818	1545
2020	416	541	957	677	620	1,297
Difference (Trips)	**-257**	**-59**	**-316**	**-51**	**-198**	**-249**
Difference (Percent)			**-25%**			**-16%**

As a result, the impact of the 100 V Street SW development is expected to be significantly lower than that analyzed in the 2018 CTR.

Please do not hesitate to contact me at jlmilanovich@wellsandassociates.com or (202) 556-1113 should you have any questions or require additional information.

EXHIBIT J

★ ★ ★

Government of the District of Columbia
Office of Planning

Large Tract Review Certification Form
Part A: Developer's Application

1. Project Name: 100 V Street

Developer: Akridge & National Real Estate Development

Address: 601 13th St NW Ste. 300

City: Washington State: DC Zip: 20005

Phone: (202) 638-3000 Fax:

E-mail: agooch@akridge.com

If Developer does not own subject property, please provide the following information regarding the property owner:

Owner(s): SW Land Holder, LLC c/o Akridge

Address: 601 13th St NW Ste. 300

City: Washington State: DC Zip: 20005

Phone: (202) 638-3000 Fax:

E-mail: agooch@akridge.com

2. Property Address: 101 V Street SW

City: Washington State: DC Zip: 20005

Ward: 6 ANC(s): 6D Square(s): 609 & 611 Parcel/Lot No. (s): 804 & 19, 810

3. Current Use(s): (place X where applicable)

Residential [ ] Retail/Office [ ] Industrial [ ] Open Space/Undeveloped [X]

Public/Institutional [ ] Other [ ]

*Maximum Height of Existing Improvement (ft.) N/A

* Total Gross Floor Area (GFA) of Existing Improvements (sq. ft.): N/A

* If Property is Undeveloped or Cleared, Enter "N/A".

4.

Note: Refer to definition of GFA in Section 199 of the D.C. Zoning Regulations

Current Zoning:

	Zoning	Land Area (sq. ft.)	M.O.R. Far*	Permitted Height (ft.)
1.	CG-4	294,800	8.2 provided that additional 1.0 FAR is devoted solely to residential uses	Maximum permitted under Act of 1910 if greater than 7.2 FAR
2.				
3.				
4.				
5.				

*Matter-Of-Right Floor Area Ratio

5. Proposed Zoning:

	Zoning	Land Area (sq. ft.)	M.O.R. Far*	Permitted Height (ft.)
1.	CG-4	294,800	8.2	Maximum permitted under Act of 1910 - 130-ft
2.				
3.				
4.				
5.				

*Matter-Of-Right Floor Area Ratio

6. Estimated Project Completion Date (mo./yr.) 2027

Type of Development (place X where applicable)

New [X] Rehab/Historic Preservation [ ] Addition [ ]

Existing Jobs Retained and/or New Jobs Created by Project:

Temporary/Construction 824 Permanent 1,098

7. Gross Floor Area (GFA) by Use:

	GFA (sq. ft.)
* Residential	1,614,558
Retail	63,529
Office	106,654
Hotel	166,194
Industrial	
Other	2
Total GFA	2,154,678

For Residential Space Only:

No. of Single-Family Units	
No. of Multi-Family Units:	2,097

Estimated Development Cost:	$180 MM
Land Cost	$87.3 MM
Construction Cost	$1.0 B
Other Cost	$92 MM
Total Project Cost	$1.36 B

8. Public Contribution: N/A

UDAG	
EDA	
D.C. Revenue Bonds	
CDBG	
Urban Renewal	
HODAG	
Other	

9. Residential/Business Displacement Due to Project: ***If not applicable or no displacement expected, enter "0"***

Number of Households Displaced	0
Number of Businesses Displaced	0

By: SW Land Investors, LLCa Delaware limited liability companyits sole member By: JACo SW Land, LLC, a Delaware limited liability company its Managing Member By: JACo Manager, Inc a Delaware corporation its Managing Member

Date Oct. 2 2020

FOR OP USE ONLY – DO NOT WRITE BELOW LINE

Project No.

Date Received by OP / /

OP Recommendation
For (check one):

Approval Disapproval

Date of Final Action / /

EXHIBIT K

AKRIDGE
Invested.

601 Thirteenth Street, NW, Suite 300 North, Washington, DC 20005
T 202.638.3000 Akridge.com

September 29, 2020

Ms. Jennifer Steingasser
District of Columbia Office of Planning
1100 4th Street, SW, Suite E650
Washington, DC 20024

Re: Authorization Letter
Large Tract Review Application
Square 609, Lot 804 & Square 611, Lots 19 and 810

Dear Ms. Steingasser:

As the sole owner of the property located at Square 609, Lot 804 and Square 611, Lots 19 and 810 (collectively, the "Property") this letter serves as authorization for the law firm of Holland & Knight LLP to represent SW LAND HOLDER LLC in all actions necessary with respect to the Large Tract Review application related to redevelopment of the Property.

Sincerely,

SW LAND INVESTORS, LLC:

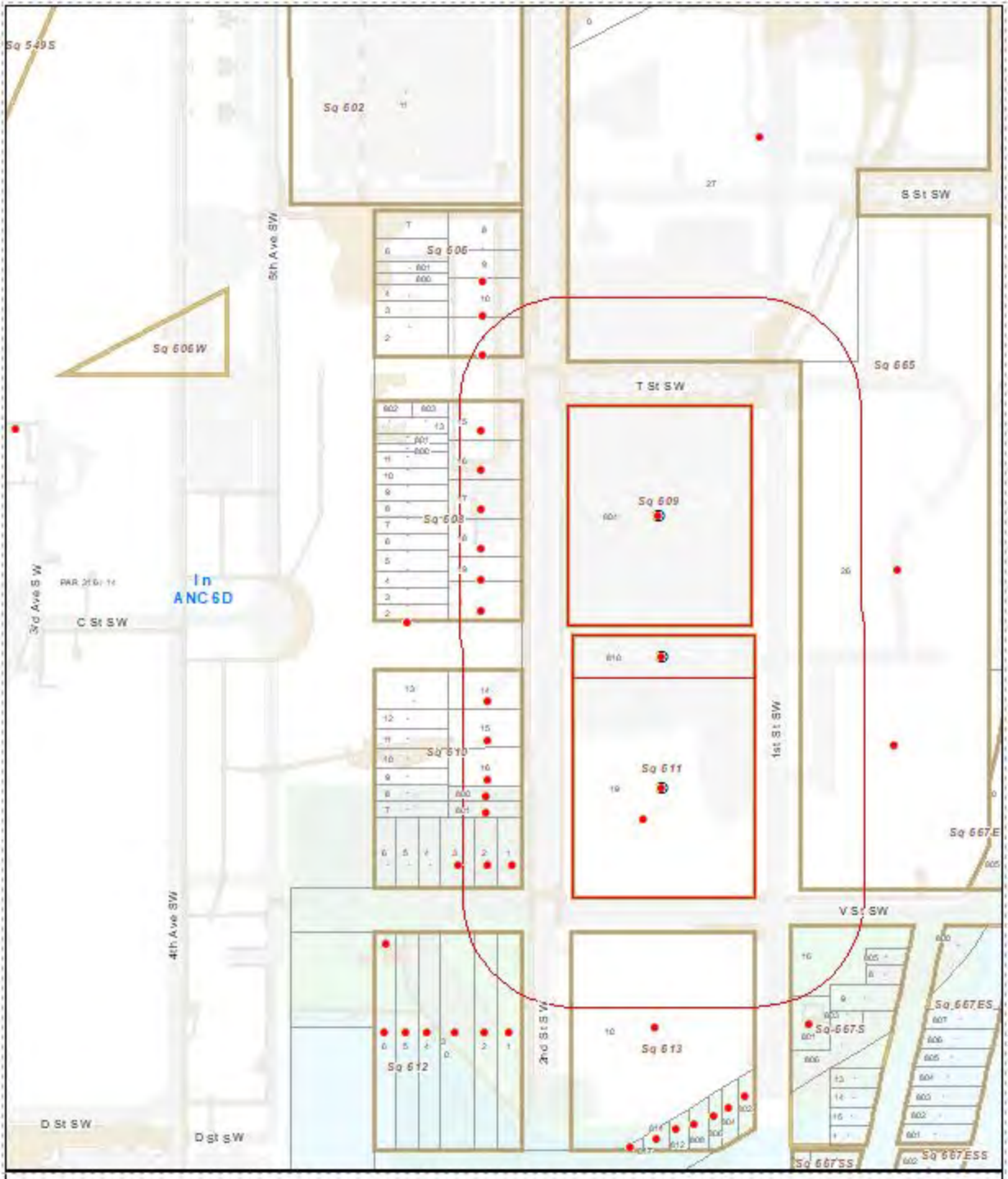
By: JACo SW Land, LLC, a Delaware limited liability company

By: JACo Manager, Inc., a Delaware corporation

By:

_____
Name

EXHIBIT L



Subject Property ID's:
Sqr 0609 Lot 0804 Sqr 0611 Lots 0810, 0019

- Subject Properties
- Radius
- Ownership Lots
- DC Squares
- ANC Boundary

DC Office of Tax and Revenue
Real Property Assessment Division
Maps and Titles Assessment Roll
Geographic Information Systems

1:2,800
0 50
Feet

Print Date: 8/27/2020

For general planning purposes

DC Ward Locator

DISTRICT OF COLUMBIA 2000 14TH ST NW FL 8 WASHINGTON, DC 20009-4487	UNITED STATES OF AMERICA ,	UNITED STATES OF AMERICA ,
S W LAND HOLDER LLC 601 13TH ST NW STE 300N WASHINGTON, DC 20005	UNITED STATES OF AMERICA ,	UNITED STATES OF AMERICA ,
JAMES CREEK MARINA 3055 PROSPERITY AVE FAIRFAX, VA 22031-2216	UNITED STATES OF AMERICA ,	UNITED STATES OF AMERICA ,
DISTRICT OF COLUMBIA 2000 14TH ST NW WASHINGTON, DC 20009-4487	UNITED STATES OF AMERICA ,	UNITED STATES OF AMERICA ,
POTOMAC ELECTRIC POWER 701 9TH ST NW WASHINGTON, DC 20001-4572	UNITED STATES OF AMERICA ,	SW LAND HOLDER LLC 601 13TH ST NW STE 300N WASHINGTON, DC 20005-3870
UNITED STATES OF AMERICA ,	S W LAND HOLDER LLC 601 13TH ST NW STE 300N WASHINGTON, DC 20005-3870	SW LAND HOLDER LLC 601 13TH ST NW STE 300N WASHINGTON, DC 20005-3870
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2100 2ND ST SW LLC
601 13TH ST NW STE 600N
WASHINGTON, DC 20005-3853

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