

BEFORE THE
ZONING COMMISSION
FOR THE DISTRICT OF COLUMBIA

SUPPLEMENTAL PREHEARING
SUBMISSION

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WATERSIDE MALL
SOUTHWEST WASHINGTON, D.C.

APPLICATION FOR A
MODIFICATION TO A FIRST-STAGE PLANNED UNIT
DEVELOPMENT,
A SECOND-STAGE PLANNED UNIT DEVELOPMENT
APPLICATION, AND
A ZONING MAP AMENDMENT

Zoning Commission Case No. 02-38A

May 18, 2007

ZONING COMMISSION
District of Columbia
CASE NO. 02-38A
EXHIBIT NO. 24A
ZONING COMMISSION
District of Columbia
CASE NO. 02-38A
EXHIBIT NO. 24A

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LIST OF EXHIBITS

<u>Description</u>	<u>Exhibit</u>
Updated Architectural Plans and Drawings	Submitted Separately
Detailed List of Sustainable Design Features – East and West Fourth Street Office Buildings	A
Detailed List of Sustainable Design Features – East and West Residential Towers	B
Draft Security and Construction Mitigation Plan	C
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I.
INTRODUCTION

This Supplemental Prehearing Statement and attached documents (the "Supplemental Prehearing Submission") are submitted by Waterfront Associates, LLC ("Waterfront"), the current long term ground lessee, and RLA Revitalization Corporation, the current owner of the subject property (collectively, the "Applicant"), in support of the application to the Zoning Commission for the District of Columbia ("Zoning Commission") for a modification to an approved first-stage Planned Unit Development ("Approved First-Stage PUD") for the entire site, second-stage review and approval of a Planned Unit Development ("PUD") for the central portion of the site, and a change to the District of Columbia Zoning Map. The Zoning Commission approved the Approved First-Stage PUD and requested zoning change in Zoning Commission Case No. 02-38, by order dated July 31, 2003, and published November 28, 2003. The Applicant is seeking these approvals in order to construct a mixed-use project of office, residential and retail uses at the location of the existing Waterside Mall, known as Lot 89 in Square 542 (the "PUD Site").

On November 15, 2006, the Applicant filed with the Zoning Commission its statement and exhibits (including architectural plans) in support of its request for PUD approvals (the "PUD Submission"). The PUD Submission set forth in detail the proposed modifications to the Approved First-Stage PUD and the elements of the second-stage PUD application, including the project design, public benefits and

project amenities, and consistency of the PUD with the Comprehensive Plan and the Ward 2 and Ward 6 Plans. At its February 12, 2007, public meeting, the Zoning Commission set this case for hearing. The Applicant then filed a Prehearing Submission with the Zoning Commission on March 30, 2007, which supplemented the PUD Submission and provided information in response to matters raised by the Zoning Commission and Office of Planning.

As set forth below, this Supplemental Prehearing Submission, along with the PUD Submission and the Prehearing Submission, meet the filing requirements for an application for a PUD and related Zoning Map Amendment under Chapter 24 and Chapter 30 of the District of Columbia Zoning Regulations.

II.

UPDATES TO ARCHITECTURAL PLANS AND ELEVATIONS

The Applicant has refined the architectural plans and details of the project to address issues raised by the Office of Planning and the Zoning Commission. These architectural plans further develop the design concepts for the project outlined in the initial submission, including reconnecting development with the surrounding community, providing a pedestrian-friendly environment, and creating well-defined public spaces. A fully-reissued copy of the updated architectural plans (the "Plans") are submitted herewith.

A. Architectural Revisions

The projected bay on the west façade of the East Fourth Street Office Building has been refined. The aluminum panels that framed the projection have been exchanged for cantilevered extensions of the aluminum and glass window

system. In addition, the horizontal bris-soleils are terminated in a vertical band near the center of the building, reducing the building's apparent length and marking the office entrance below. The revised bay expression, break in bris-soleils, and the second floor setback increase the legibility of the building's retail base.

In addition, the Applicant has incorporated refinements to the design of the East and West Residential Towers. These façade revisions include rearrangement of the glazing and solid panels based on the anticipated unit layouts, the reduction of glazing area with metal and/or terra cotta wall panels, and the addition of opalescent glazing to mark the building entrances at the end of the East and West Plazas.

B. Refinements to Landscape and Public Spaces

The Applicant has refined the West Courtyard landscape design to reinforce the activation of the Fourth Street sidewalks and plazas by pedestrians. The courtyard plan has developed from a large open space with a strong pedestrian path that connected the West Residential Tower and Northwest Building into a series of more enclosed, intimate spaces. The spaces are more residential in nature, serving as "outdoor rooms" to serve the adjacent residential buildings. Removing the path encourages the building residents to filter out into Fourth Street and the West Plaza, activating these important public spaces.

The Metro Plaza has also been enhanced. The Applicant has added a second row of shade trees, modular seating elements with internal lighting, and water features. The vertical columns of water emerging from flush mounted jets in the

pavement of the plaza will add visual and acoustic interest to the space. Lighting will be incorporated in the water feature to increase the effect at night.

The shared West Private Drive streetscape has also been refined. The center portion of the drive is raised in order to create a connection between the adjacent development's amenity building and the base of the West Tower. The raised portion of the drive calms traffic and promotes pedestrian circulation across the drive from the adjacent residences to the West Plaza and Metro Plaza beyond. The raised portion of the drive is terminated at each end by an extension of the paved walks that flank the central courtyard of the adjacent development. Garden planting and green screens along the base of the West Residential Tower supplement the center portion of the drive and provide visual privacy to the residential units on the first floor.

The Applicant has also refined the landscape courtyard over the grocery store. Specifically, the residential terraces in the East Courtyard are depressed in order to accommodate units on the second floor. The remainder of the landscaping in this courtyard has been further refined to create two zones: a lawn and trees along the southern edge and sedum green roof panels along the northern end.

C. Refinements to Vehicular Access

Refinements to the vehicular circulation on the PUD Site have been incorporated into the Plans. The residential parking entrances and the loading facilities for the West Residential Tower and Northwest Building have been consolidated, enhancing the character of the shared West Private Drive. The

commercial parking entrance for the West Fourth Street Office Building, previously accessed from the West Plaza Private Drive, will be accessed directly from Fourth Street directly opposite to the commercial garage entrance ramp for the East Fourth Street Office Building. Relocating the commercial ramp to Fourth Street consolidates commercial parking access, relieving the West Plaza of commercial traffic enhancing pedestrian circulation and uses within the space.

D. Refinements to Pedestrian Circulation

In conjunction with the parking entrance enhancements, the pedestrian site circulation has also been refined. A crosswalk with a pedestrian signal has been added proximate to the Metro escalator that connects the East and West Plazas, providing a more direct connection across the pedestrian-friendly streetscape environment of Fourth Street. This link provides a pedestrian connection that extends beyond this project to include the surrounding residential neighborhood, creating an active town center environment around the Metro that is shared by the community.

E. Refinements to Roof Structures

The roof structures on the East and West Residential Towers have been refined. The architectural roof embellishments shown in the original PUD Submission have been removed. Moreover, the mechanical penthouse enclosures have been reduced, conforming to Zoning Regulations for uniformity of height and applicable set backs. A secondary screen – which is less than four feet in height,

and set back at least four feet – has been added at the perimeter of the main roof of each building in order to screen the mechanical system condensing units.

The roof structure diagram submitted with the Prehearing Submission illustrated that the roof structures for all four buildings submitted in the Stage-Two application conform to setback and area provisions set forth in the Zoning Regulations. The Applicant continues to seek flexibility from the uniform height provisions for the East and West Fourth Street Office Buildings, where the roof structures step down from a maximum height of 18 feet, 6 inches at the northern end of the building to 13 feet, 6 inches at the southern end. At the southern end, additional height is not needed to contain the mechanical equipment. As indicated on the roof structure diagram (and resubmitted with the plans herewith), the roof structures on each building are smaller than the maximum size permitted by the Zoning Regulations. At the Office of Planning’s request, additional plans have been submitted to illustrate the potential layout of mechanical equipment within the penthouse structure of each building.

III.
FURTHER UPDATES TO PUBLIC BENEFITS AND PROJECT
AMENITIES PACKAGE

In the PUD Submission, the Applicant set forth the details regarding its proposed public benefits and project amenities. These public benefits and project amenities apply to both the modification to the Approved First-Stage PUD and the request for second-stage PUD approval. The Applicant further refined and articulated the amenities package in its Prehearing Submission. This Supplemental Prehearing Submission summarizes additional information regarding

the amenities package, much of which has resulted from the Applicant's work with the community.

A. Retail and Establishment of a Town Center

In its Prehearing Submission, the Applicant set forth the elements of its retail commitment, including elements of its commitment to locating a grocery store within the development. As a result of the Applicant's work with the community, the Applicant further commits as follows:

1. Minimum Retail Commitment

The Applicant continues to commit to providing a minimum of 110,000 square feet of retail space fronting primarily on 4th and M Streets. As a result of discussions with the community, the Applicant now agrees that the retail space will be targeted for neighborhood serving retail, including but not limited to uses such as restaurants, coffee shops, flower shops, video stores, grocery stores, drug stores, banks, electronic stores, bakeries, dry cleaners and the like.

2. Revision to the Grocery Store Commitment

In the Prehearing Submission, the Applicant set forth its grocery store commitment. Based on discussions with the community, the Applicant further revises its grocery commitment to eliminate the reference to a neighborhood service area. Thus, the Applicant will use best commercially reasonable efforts to lease the space to a grocery store whether or not a grocery store of more than 30,000 square feet has already been located in the neighborhood.

Accordingly, the Applicant's grocery store commitment is now as follows:

As part of the on-site retail, the Applicant has included space for a new 55,000 square foot grocery store within the first phase of the project. The Applicant has been working closely with the existing grocery store on the PUD Site to renegotiate its lease, currently set to expire in December 2020, and to relocate the existing grocery store to the proposed new grocery store location on the east side of the project. The Applicant will continue to use best commercially reasonable efforts to complete such negotiations with the goal of executing a lease by August 18, 2007. If a lease is executed, the Applicant will maintain the space for the existing grocery store to operate while the new store is under construction.

In the event that the Applicant is unable to successfully negotiate a lease within the above timeframe, the Applicant agrees to:

(a) Honor the existing grocery store lease expiring in 2020.

(b) Reserve the proposed grocery location on the east side of the project and use best commercially reasonable efforts to lease such space to a full service grocery store (approximately 55,000 square feet) for a term commencing upon the earlier of the termination of the existing grocery store lease encumbering the

property as the date hereof or the vacation of such space for any other reason.

B. Affordable Housing Commitment

The Applicant set forth the details of its affordable housing commitment in the Prehearing Submission. As part of this benefit, the Applicant commits that at least 160,000 square feet of residential use will be devoted to affordable housing. In the Prehearing Submission, the Applicant committed to maintain the rental units as affordable for twenty years from the date of certificate of completion and to maintain the for sale units as affordable for a minimum of ten years from the date of initial sale. The Applicant modifies this commitment to increase the affordability time period for the for sale units to twenty years from the date of initial sale. All other details regarding the affordable housing commitment are as set forth in the Prehearing Submission.

C. Sustainable Design Features

In its Prehearing Submission, the Applicant stated in general terms its commitment to sustainable design features including, among other items, storm water management, green roofs, and erosion and sedimentation control. Attached as Exhibit A and Exhibit B are detailed lists of the sustainable design features proffered for the East and West Fourth Street Office Buildings and for the East and West Residential Towers respectively.

Furthermore, during a one-year storm event, the landscape elements in the East and West Courtyards and the sedum green roof panels on the East and West

Fourth Street Office Buildings provide a 30% reduction in the volume of storm water runoff from the PUD Site when compared to the substantially impervious existing site conditions. The plants slow the flow of storm water into the Municipal system, relieving the infrastructure during storm surges. The plants also aid in evapotranspiration, returning water that is utilized by the plants for growth and nourishment to the atmosphere, bypassing the Municipal system entirely. Storm water that enters the Municipal system from the PUD Site is filtered by the plants passively, relieving the maintenance that structured filters require. Captured water, otherwise discharged into the Municipal storm system, will be utilized for irrigation.

D. Community Meeting Space

The Applicant commits to provide approximately 1,000 square feet of office and meeting space for Advisory Neighborhood Commission ("ANC") 6D and the Southwest Neighborhood Assembly for a minimum of a ten-year term commencing upon the initial occupancy of such space. Within this committed space, the Applicant will provide approximately 350 square feet of space to each organization and a shared conference room.

E. Security and Construction Mitigation Plan

The ANC and other members of the community have expressed concerns related to the security of the PUD Site during construction and related impacts on nearby properties from construction. As a result, the Applicant proffers that a Security and Construction Mitigation Plan will be in place throughout the

development of the project. A draft of this plan is attached as Exhibit C. The Applicant will continue to work with the community, RLA Revitalization Corporation and the District government to update this plan as is necessary throughout construction.

IV. REVISED AND UPDATED TRAFFIC IMPACT ANALYSIS

The Applicant submits as Exhibit D a revised and updated traffic impact analysis which replaces the traffic impact study issued on October 31, 2006, and submitted as Exhibit F to the PUD Submission. The original study was revised to account for the following changes in the traffic analysis:

- Addition of other background developments based on previous studies performed in the area as requested by DDOT.
- Changes to the overall development plan.
- Changes to the site circulation plan.

The traffic study finds that the study intersections will operate at acceptable levels of service upon full build-out of the project, except at the intersection of 4th and M Streets. The Applicant proposes to re-stripe the eastbound (M Street) right turn lane into a through/right shared lane. This mitigation measure – along with standard DDOT adjustments to the AM and PM signal timings – results in that intersection operating at acceptable levels of service.

V.
UPDATE ON STATUS OF WORK WITH COMMUNITY

The Applicant has continued to work with the community and make modifications to aspects of the project as a result of that work. At its regularly scheduled public meeting on May 14, 2007, ANC 6D voted to support the project by a vote of 6-1-0.

VI.
ADDITIONAL REQUESTED AREA OF FLEXIBILITY

In addition to the requested flexibility set forth in Section VIII of the PUD Submission, the Applicant requests additional flexibility as follows:

- To vary the final alignment and design of the Fourth Street right-of-way in consultation with and as approved by the District Department of Transportation. This flexibility includes the right to make changes to locations of curb cuts, bulb outs, crosswalks, traffic calming measures, parking spaces, and parking meters, as well as the flexibility to make changes to the design and location of paving materials.
- To vary the design and components of the proposed streetscape. This flexibility includes the right to make changes to paving materials and design, street lights, street furniture, trees and landscaping. This flexibility also includes the right to make changes to the overall design of the streetscape to comply the streetscape standards of the Anacostia Waterfront Initiative.

VII.
CONCLUSION

This Supplemental Prehearing Submission, along with the original PUD Submission and the Prehearing Submission, meets the filing requirements for an application for a modification to the Approved First-Stage PUD, an application for a second-stage PUD approval, and an application for an amendment to the Zoning Map under Chapters 24 and 30 of the Zoning Regulations. For the foregoing reasons, the Applicant respectfully requests that the Zoning Commission approve the applications.

Respectfully submitted,

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By: 
Wayne S. Quin, Esq.

By: 
Christy M. Shiker, Esq.

A

Sustainable Design Features

WATERFRONT

East and West Fourth Street Office Buildings

The following Sustainable Design Elements are 22 items that the owner has committed to provide for the project. The project is registered with the U.S. Green Building Council, and will be submitted for review with the goal of achieving a LEED Silver rating. The project will be designed in accordance with the definitions used in LEED for New Construction Version 2.2.

Sustainable Sites

Erosion and Sedimentation Control:

An erosion and sediment control plan will be required in conformance with Local code to contain soil, and prevent sedimentation and dust during demolition and construction. Preliminary plans and details have been included in the Filing documents.

Site Selection:

Verification that the site does not violate any of the prohibited site characteristics defined by LEED.

Urban Redevelopment (Development Density and Community Connectivity):

Verification that either 10 basic community services exist within a ½ mile radius, or that the site is within a community with at least a 1.5 average FAR.

Hazardous Materials Abatement (Brownfield Redevelopment):

All hazardous materials will be removed in accordance with Local and Federal regulations and guidelines.

Alternative Transportation-public transportation::

Verification of distance of less than 1/2 mile to the Metro or 1/4 mile to 2 bus line stops.

Site Development (Protect or Restore Habitat):

A green roof will be provided to restore native and adapted vegetation suitable to the project area's climate.

Alternative Transportation: Low-Emitting & Fuel Efficient Vehicles

Preferred parking will be provided for low-emitting and fuel-efficient vehicles for 5% of the total vehicle parking capacity of the site.

Stormwater Management (Quality):

A green roof will be provided to help treat stormwater to standards specified by LEED.

Sustainable Design Features

WATERFRONT

Heat Island Effect (Non-Roof):

The location of the parking in a subsurface garage will meet the non-roof heat island effect definition.

Heat Island Effect (Roof):

At least 50% of the roof area will be green to meet the roof heat island effect definition.

Water Efficiency

Water Efficient Landscaping:

A 50% reduction in potable water consumption for irrigation will be achieved.

Water Use Reduction, 20%:

Plumbing fixtures that reduce water usage by 20% over code compliant levels will be specified and required.

Energy and Atmosphere

Fundamental Building Systems Commissioning:

The building common systems will follow the commissioning practices defined in the LEED handbook.

Minimum Energy Performance:

The project will meet the ASHRAE 90.1 2004 performance requirements.

Fundamental Refrigerant Management

CFCs will be eliminated from building mechanical systems.

Green Power

35% of the buildings electricity will be provided from renewable sources by engaging in at least two-year renewable energy contract.

Materials and Resources

Construction Waste Management:

A minimum of 50% of non-hazardous demolition debris will be salvaged or recycled. A construction waste management program will be developed for the demolition and construction phases of the project.

Sustainable Design Features

WATERFRONT

Indoor Environmental Quality

Minimum IAQ Performance:

The project will comply with the ASHRAE 62.1 ventilation requirements.

Construction IAQ Management Plan-during construction:

A plan articulating construction procedures to protect and enhance indoor air quality will be required. Strict adherence to the plan during construction will be evidenced with photographs. If permanent AHUs are used during construction high efficiency filters will be required.

Low-Emitting Materials, Paints and Coatings:

Low emitting paints and coatings will be specified and required.

Low-Emitting Materials, Carpet:

Green Label Plus certified carpet systems will be specified and required.

Innovation & Design Process

LEED Accredited Professional:

The project will utilize the services of a LEED-AP professional.

B

Sustainable Design Features

WATERFRONT

East and West Tower Converted Residential Buildings

The following Sustainable Design Elements are 19 items that the owner has committed to provide for the project. The project is registered with the U.S. Green Building Council, but may not be submitted to the U.S. Green Building Council for review and LEED certification; however, the project will be designed in accordance with the definitions used in LEED for New Construction and Major Renovations Version 2.2 as outlined below.

Sustainable Sites

Erosion and Sedimentation Control:

An erosion and sediment control plan will be required in conformance with Local code or the 2003 EPA Construction General Permit to contain soil, and prevent sedimentation and dust during demolition and construction. Preliminary plans and details have been included in the Filing documents.

Site Selection:

Verification that the site does not violate any of the prohibited site characteristics as defined by LEED.

Urban Redevelopment (Development Density and Community Connectivity):

Verification that either 10 basic community services within a ½ mile radius, or that the site is within a community with at least a 1.5 average FAR.

Hazardous Materials Abatement (Brownfield Redevelopment):

All hazardous materials will be removed in accordance with Local and Federal regulations and guidelines.

Alternative Transportation-15% bike storage:

Bike storage will be provided for 15% of the total number of units constructed.

Alternative Transportation-public transportation:

Verification of distance of less than 1/2 mile to the Metro or 1/4 mile to 2 bus line stops.

Stormwater management (Quality):

Filtration and stormwater tank meeting WASA requirements will be provided.

Heat Island Effect (Non-roof):

The location of the parking in a subsurface garage avoids large surface parking lots and helps to keep the site cooler.

Sustainable Design Features

WATERFRONT

Materials and Resources

Construction Waste Management:

A minimum of 50% non-hazardous demolition debris will be salvaged or recycled. A construction waste management program will be developed for the demolition phase of the project.

Building Adaptive Reuse:

A minimum of 75% of the existing structural frame will be maintained for reuse.

Storage and Collection of Recyclables:

Adequate space will be provided for the collection and storage of domestic recyclable materials including paper, plastics, metals, glass and cardboard.

Indoor Environmental Quality

Minimum IAQ Performance:

The project will comply with the ASHRAE 62.1 ventilation requirements.

Construction IAQ Management Plan-during construction:

A plan articulating construction procedures to protect and enhance indoor air quality will be required. Strict adherence to the plan during construction will be evidenced with photographs. If permanent AHUs are used during construction high efficiency filters will be required.

Low-Emitting Materials, Paints & Coatings:

Low emitting paints and coatings will be specified and required.

Low-Emitting Materials, Carpet:

Green Label Plus certified carpet systems will be specified and required.

Controllability of Systems – lighting:

The project will be designed to provide control of lighting to over 90% of occupants.

Controllability of Systems – thermal comfort:

The project will be designed to provide control of thermal comfort and operable windows for over 50% of occupants.

Sustainable Design Features
WATERFRONT

Innovation & Design Process

LEED Accredited Professional:

The project will utilize the services of a LEED-AP professional.

Energy Star Appliances:

Energy Star appliances will be specified and required.

C

WATERFRONT

A Mixed-Use Revitalization in Southwest Washington, DC
401 M Street, SW, Washington, DC 20024
www.waterfrontdc.com

NEIGHBORHOOD SECURITY & CONSTRUCTION MANAGEMENT PLAN

DRAFT 4/24/07

Development by Forest City Washington and Vornado/Charles E. Smith
1501 K Street, NW, Suite 300, Washington, DC 20005
Phone: 202-331-4300 Fax: 202-331-4313



- I. Mall, Metro, Safeway, CVS, and Bank of America Operations
- II. Security Guards and Lighting
- III. Pedestrian Circulation
- IV. Public Transportation Options
- V. Construction Mitigation Plan
- VI. Contact Information

I. Mall, Metro, Safeway, CVS, and Bank of America Operations

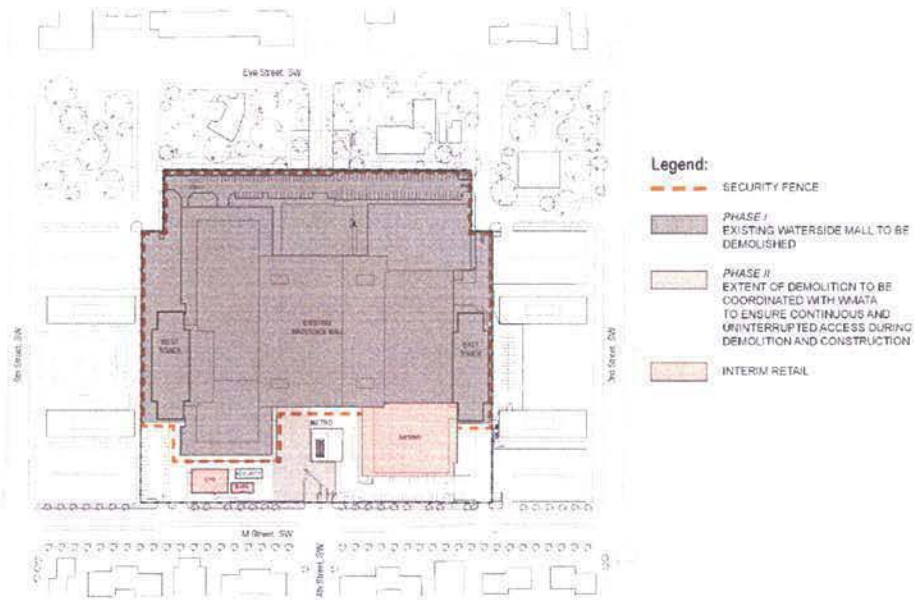
The pedestrian connection through the mall is projected to close in June 2007 in connection with Phase 1 Demolition and Construction. Notices will be posted at the mall entrances at least two weeks prior to the closing. Notice will also be given to the ANC, SWNA, MPD, PSA 104, SWAT, and adjacent property owners.

Mall hours prior to Phase 1 Demolition and Construction will continue to be:

- Monday – Friday 5am – 11pm
- Saturday – Sunday 6am – 11pm

CVS and Bank of America are currently located in areas of the mall that will be demolished, making way for new construction. Both retail services will be relocated to temporary locations and continue to provide services to the community throughout construction. Upon completion of construction in late 2009, CVS and Bank of America will be relocated to new space within the new office buildings. Construction will not interrupt access or operations of Safeway and Metro.

Phase 2 Demolition and Construction in front of Safeway and around the Metro escalator entrance will be required to complete construction of 4th Street through the site. Construction will be phased such that access and operations of Safeway and Metro are not interrupted. More detailed information will be provided at least two weeks prior to Phase 2 Demolition and Construction.



II. Security Guards and Lighting

Waterfront Associates will continue to provide private security guard services and off duty MPD officers during construction to patrol areas of the site not restricted by construction activity. The schedule of both security guards and off duty officers will be available at the Waterfront Management Office; however, Waterfront Associates will provide at least two private security guards 24/7.

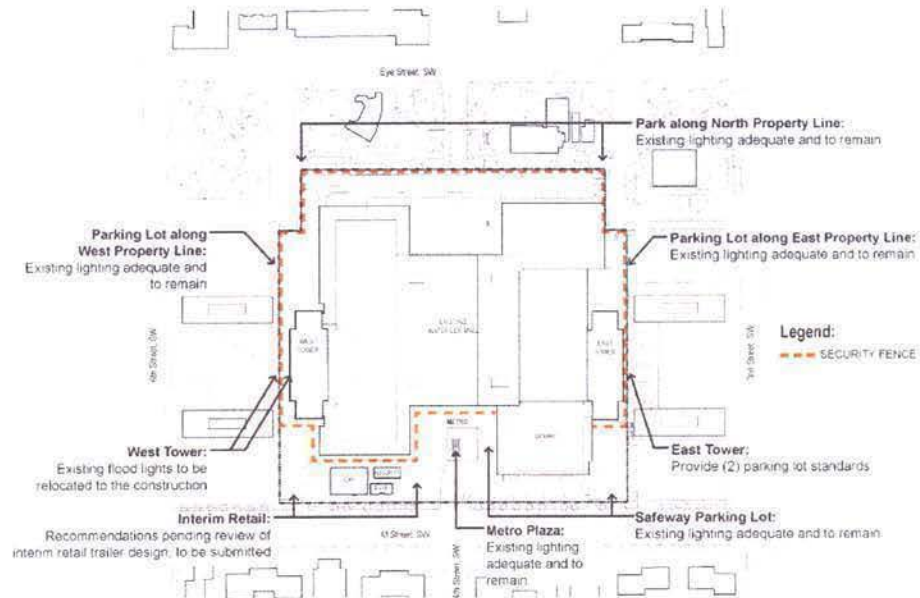
The general contractor(s) will be responsible for providing adequate security for areas within any limits of construction. Upon commencement of construction, Waterfront Associates will require the general contractor to provide sufficient security to patrol the areas within it control. Any general contractor's security schedule will also be available at the Waterfront Management Office.

Waterfront Associates will coordinate its private security and MPD officers with any general contractor's security to ensure proper communication and coverage.



II. Security Guards and Lighting

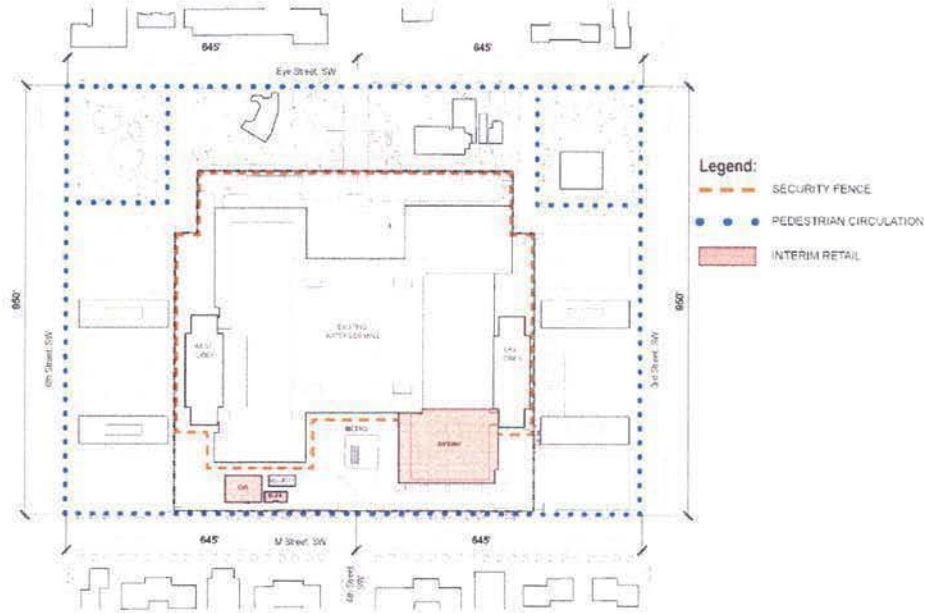
In addition to providing private security forces, Waterfront Associates will install sufficient lighting to effectively illuminate the perimeter of all construction areas and the entirety of the retail and publicly accessible areas. The plan below was prepared by a professional lighting consultant who was commissioned to evaluate the existing exterior lighting that will remain and additional lighting required to meet the goals above:



III. Pedestrian Circulation

Demolition and construction will prevent pedestrian access through the center of the site. MPD has recommended that pedestrians use 3rd or 6th Street as an alternative when traveling between M and I Streets around the site. MPD has been notified of the additional pedestrian activity that will occur on 3rd and 6th Streets due to the closing of the Mall and has requested DDOT to provide additional lighting on these streets.

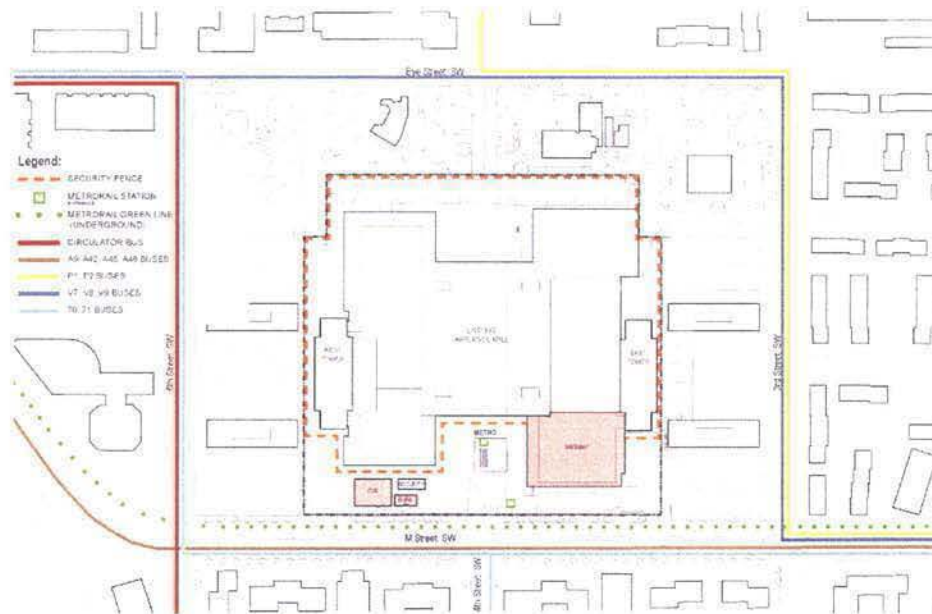
Depending on the phasing of demolition and construction, limited pedestrian access may be provided at the eastern and/or western edges of the site when possible. More information will be made available as plans progress.



IV. Public Transportation Options

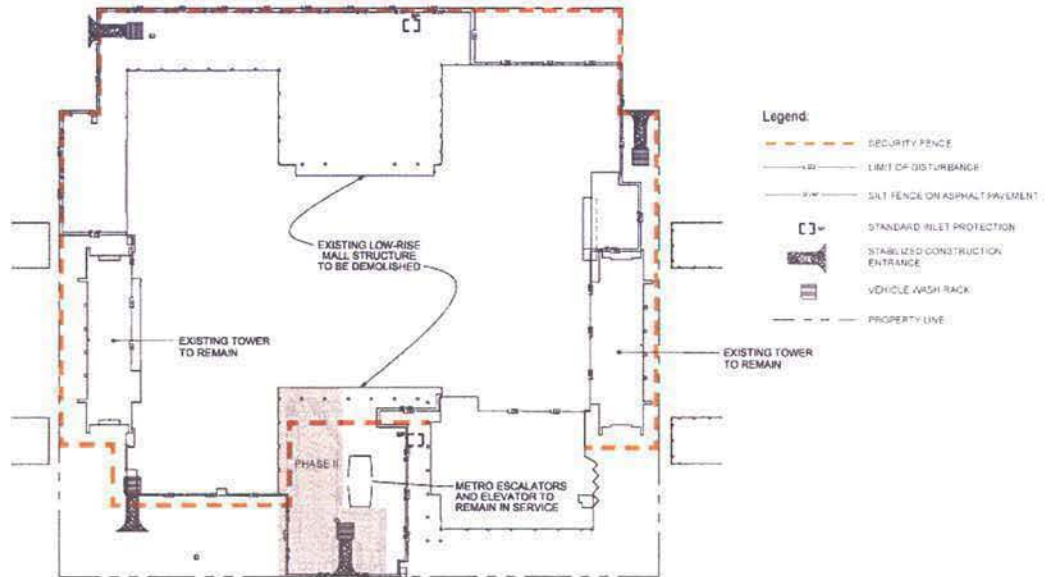
Numerous public transportation options are available to the Southwest community and visitors to aid in circulating to, from, and around the neighborhood.

- **WMATA Bus Service:** Seven bus routes serve roads surrounding Waterfront. The D.C. Circulator, P1, P2, 70, 71, V7, V8 and V9 buses run regularly from I Street to M Street and connect with other Metro stations such as L’Enfant Plaza, Federal Center SW, and Gallery Place/Chinatown. Bus schedules can be found at www.wmata.com.
- **MetroAccess:** MetroAccess is a shared ride, curb-to-curb paratransit service for people who cannot use public transportation. Call (301) 562-5360 for more information or go to www.wmata.com.
- **Alternative Metro Stations:** Federal Center SW and L’Enfant Plaza are located just north of I-395.
- **FlexCar:** FlexCar is available on site at Waterfront and will remain available throughout construction. More information can be found at www.flexcar.com.



V. Construction Mitigation Plan

Construction vehicular access to the site will be limited to the plan below. Any change will be coordinated with adjacent property owners and new information will be made available in the Waterfront Property Management Office.



Additional construction mitigation measures will be prepared and made available once a general contractor is selected.

V. Contact Information

Waterfront Associates

Forest City Washington
202-496-6600

- David Smith, Development Manager

Vornado/Charles E. Smith
703-769-8200

- Gordon Fraley, Development Manager
- Corwin Holland, Property Manager
- Kathryn Clement, General Manager – Management Services

Watkins Security
(202) 581-2871

D

Revised Traffic Impact Study

Waterfront Development

Washington, D.C.

May 9, 2007

Revised from October 31, 2006 Traffic Impact Study

Prepared For:

Forest City Washington
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Suite 400
Washington, DC 20036

Vornado Realty Trust/Charles E. Smith Companies
1501 K Street, Suite 300
Washington D.C. 20005

Prepared By:

Gorove/Slade
Associates, Inc.





GOROVE/SLADE ASSOCIATES, INC.
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EXECUTIVE SUMMARY

The following report contains the findings of a revised traffic impact analysis conducted for the proposed Waterfront development, currently known as the Waterside Mall, a mixed-use development located in Southwest Washington, DC. This traffic impact analysis replaces the traffic impact study prepared on October 31, 2006.

The Waterfront development program embraces a mixed-use and pedestrian-friendly design concept to bring a vibrant, balanced, and sustainable diversity of activities and land uses to the SW Waterfront. The overall Waterfront mix will include commercial office, retail, restaurants, cafes, theaters, recreational facilities, rental and owner-occupied housing, structured garage, street and surface parking, along with pedestrian walkways, sidewalks and alleyways, incorporating streetscape enhancements. The Waterfront development proposal includes:

- A high-quality grocery store;
- More than 1,172,000 square feet of new office space in four buildings;
- Street level retail and restaurant space;
- New housing in the form of modern apartments both condominium and rental with affordable housing components, total residential is approximately 1,040 dwelling units;
- State of the art urban design replacing a highly successful, but dated super-block style development; and
- Convenient and ample structured parking built to serve this new mix of uses.

The current application is a revision to the Stage 1 PUD application approved in 2002/2003. The application approved back in 2002/2003 envisioned approximately 400 dwelling units, 45,000 square feet of ground floor retail, 2.0 million square feet of office, and a 30,000 square foot grocery store. The current application envisions increasing the residential units and retail while decreasing the office square footage. The current plan will generate approximately 37 additional AM peak hour trips and approximately 40 less PM peak hour trips than the application approved in 2002/2003.

The project site is bounded by M Street to the south, 6th Street/Makemie Place to the west, Eye Street to the north, and 3rd Street/Wesley Place to the east. Currently, direct access to the site is provided from M Street and 6th Street/Wesley Street. This access will be maintained throughout the redevelopment along with access proposed along the planned extension of 4th Street from M Street in the south to Eye Street in the north. The project site was analyzed over two horizon years with the first interim development year assumed to be complete in the year 2010 and the final build-out to occur in 2020.



The analysis presented in this report supports the following major conclusions:

- *Existing Conditions (2006)*

The existing Waterside Mall site is served by an extensive network of public transportation, including the Waterfront-SEU Metrorail station located at the site, five different bus lines (with eleven different bus routes), and the DC Circulator. The availability of public transportation contributes to the reason that all intersections contained within the study area operate at acceptable Levels of Service (LOS) under existing conditions during the morning and afternoon peak hours.

- *Future Conditions without Development (2010)*

The results of the future without the proposed development (2010) capacity analyses show that, with the addition of regional inherent growth and nearby planned background developments, all study area intersections are projected to operate at acceptable LOS, except the intersections of 7th Street with Maine Avenue and I Street with 4th Street. With adjustments to the signal timings during the afternoon peak hour, these intersections will operate at acceptable levels.

- *Future Conditions with Interim Year Development (2010)*

Currently, 4th Street SW is disconnected between Eye Street and M Street SW. With the redevelopment of the proposed Waterfront Development, 4th Street will be reconnected completing the grid street network that is essential in urban areas. The future cross-section is designed with traffic calming measures, bicycle accommodations, and pedestrian considerations as recommended by DDOT.

The Stage II PUD (build year 2010) of the proposed Waterfront Development will consist of approximately 360 residential dwelling units, 544,695 square feet of office, a 55,000 square foot grocery store, and 20,205 square feet of ground floor retail. The interim development will generate approximately 245 morning peak hour trips, 310 afternoon peak hour trips, and 1,745 average daily vehicle trips. The future analysis with interim year development showed that the study intersections would continue to operate at acceptable levels, except the intersection of 4th Street and M Street. With adjustments to the signal timings during the afternoon peak hour, this intersection will operate at acceptable levels.

- *Future Conditions with Full Build-out Development (2020)*

The remainder of the Waterfront Development will consist of approximately 680 residential dwelling units, 628,145 square feet of office, and 48,850 square feet of ground floor retail. This development under the build years of 2010 to 2020 will generate approximately 255 morning peak hour trips, 255 afternoon peak hour trips, and 2,165 average daily vehicle trips. The total development at full build-out will consist of approximately 1,040 dwelling units



(condominium or apartment), 69,055 square feet of ground floor retail, 1.172 million square feet of office, and 55,000 square foot grocery store. The future analysis with full build-out development showed that the study intersections would continue to operate at acceptable levels, except at the intersection of 4th Street and M Street SW. This intersection will operate at acceptable levels after restriping the eastbound right turn lane into a through/right shared lane and adjusting the AM and PM signal timings.

Based on these results, the proposed Waterfront Development will help better traffic conditions in the study area by completing the grid network with the construction of 4th Street SW between Eye Street and M Street. The addition of Waterfront Development traffic has minimal impact and the surrounding network can accommodate these additional vehicle-trips.



INTRODUCTION

This report contains the findings of a revised traffic impact analysis conducted for the proposed Waterfront development, currently known as the Waterside Mall, a mixed-use development located in Southwest Washington, DC. This traffic impact analysis replaces the traffic impact study prepared on October 31, 2006. The proposed redevelopment plan consists of approximately 1,040 dwelling units, 1.172 million square feet of office, 55,000 square foot grocery store, and 69,055 square feet of ground floor retail.

The project site is bounded by M Street to the south, 6th Street/Makemie Place to the west, Eye Street to the north, and 3rd Street/Wesley Place to the east. Currently, direct access to the site is provided from M Street and 6th Street/Wesley Street. This access will be maintained throughout the redevelopment along with access proposed along the planned extension of 4th Street from M Street in the south to Eye Street in the north. The project site was analyzed over two horizon years with the first interim development year assumed to be complete in the year 2010 and the final build-out to occur in 2020. A regional map showing the location of the site is included in Figure 1.

The following tasks were completed as part of this study:

- Field reconnaissance in the vicinity of the project site was conducted to collect information related to existing traffic controls, roadway geometry and operational characteristics;
- Traffic counts were conducted on August 30, September 6 and 12, 2006 during the morning and afternoon peak periods at the intersections surrounding the Waterfront Development site;
- Future traffic volumes were projected using background inherent growth rates based on historical traffic volume data, and by estimating traffic generated by planned local background developments in the vicinity of the site;
- Since 4th Street will be reconnected from Eye Street to M Street as part of this project, existing traffic volumes were redistributed along 4th Street based on existing peak hour traffic volume patterns, average daily traffic volumes at major roadway sections, and locations of surrounding roadway travel corridors;
- Site traffic volumes were generated based on the methodology outlined in the Institute of Transportation Engineers' (ITE) Trip Generation, 7th Edition along with reduction of trips based on historical growth patterns within the Washington, DC metropolitan area, and the *2005 Development-Related Ridership Survey* by the Washington Metropolitan Area Transit Authority (WMATA);
- Intersection capacity analysis were performed for existing conditions (2006), future without development (2010), future with interim year development (2010), and future with full build-out development (2020) peak hour conditions at the intersections contained within the



study area;

Sources of data for this study include Washington, DC Department of Public Works and Department of Planning, WMATA, previous studies performed in the area (i.e. *Waterfront Development – Traffic Impact Analysis* prepared by Gorove/Slade Associates on November 11, 2002; *United States Department of Transportation Headquarters – Traffic Impact Study* prepared by Gorove/Slade Associates on March 14, 2003; *Southeast Federal Center – Transportation Master Plan* prepared by Gorove/Slade Associates on July 7, 2006; *Florida Rock Properties, Inc. Planned Unit Development (PUD) – Revised Traffic Impact Analysis* prepared by Gorove/Slade Associates on November 14, 2006; *Marina View – Traffic Impact Study and Discussion of Additional Analysis* prepared by Gorove/Slade Associates on December 4, 2006 and February 23, 2007, respectively; and *Monument Ballpark, Square 700 & 701 – Transportation Impact Study* prepared by Wells & Associates, LLC on December 12, 2006), and the office files and field reconnaissance efforts of Gorove/Slade Associates, Inc.



Figure 1: Regional Map and Site Location

Scope of Study

This traffic impact analysis was conducted in accordance with the general requirements of Chapter 45 of the DDOT *Design and Engineering Manual* and in coordination with DDOT Staff. A copy of the document summarizing the details of the original study parameters (as outlined to DDOT staff) is included in the Appendix to this report.

The study area extends from 7th Street SW in the west to 3rd Street SW in the east, and Eye Street in the north to N Street in the south. Intersections to be included in the study were selected based on the existing and projected ingress and egress patterns of vehicles. The following study intersections (as shown on Figure 2) are included in this study:

- M Street and 3rd Street
- M Street and 4th Street
- M Street and 6th Street
- Maine Avenue and 7th Street
- I Street and 3rd Street
- I Street and 4th Street
- I Street and 6th Street
- 4th Street and N Street



Report Outline

This report presents the findings of analyses performed for the following conditions:

- **Existing Conditions (2006):** Consider existing traffic volumes and roadway configurations during the weekday morning and afternoon peak hours.
- **Future Conditions without Development (Future Background 2010):** Considers future traffic conditions resulting from inherent traffic growth and nearby approved developments, but does not include volumes generated by the proposed Waterfront development.
- **Future Conditions with Interim Year Development (Total Future 2010):** Considers future traffic volumes with the background growth, nearby approved developments, and traffic generated by the proposed interim Waterfront development.
- **Future Conditions with Full Build-out Development (Total Future 2020):** Considers future traffic volumes with the background growth, nearby approved developments, and traffic generated by the full build-out of the proposed Waterfront development.

The results of the analysis and the traffic impacts associated with the proposed development plan are presented in the Conclusion section of this report.



EXISTING CONDITIONS (2006)

Site Access

The proposed development is located in Southwest Washington, DC. The project site is bounded by M Street to the south, 6th Street/Makemie Place to the west, Eye Street to the north, and 3rd Street/Wesley Place to the east. There currently is direct access to the site from M Street, and 6th Street/Makemie Place.

Existing Roadway Network

The existing roadway network in the vicinity of the proposed Waterfront site is described below:

- M Street/Maine Avenue is a six-lane, divided, east-west, major collector currently constructed from 17th Street NW/Independence Avenue SW to the west and terminates in the east at 11th Street SE. The posted speed limit in the vicinity of the site is 30 mph.
- I Street is a four-lane, east-west, minor collector currently constructed from 7th Street SW in the west to New Jersey Avenue SE in the east. The posted speed limit in the vicinity of the site is 30 mph.
- 4th Street is a four-lane, north-south, minor collector currently constructed from P Street SW in the south to M Street SW in the north. 4th Street continues from Eye Street SW in the south to Pennsylvania Avenue NW in the north. 4th Street originally continued from P Street to Pennsylvania Avenue, but was split as part of the original Waterside Mall development. The current plan is to reconnect 4th Street from P Street in the south to Pennsylvania Avenue in the north. The connection will be made in two stages – the portion extending from Eye Street to K Street will be constructed by the park who currently owns the parcel north of Waterside Mall, and the southern portion from K Street to M Street will be constructed as part of this application. The posted speed limit in the vicinity of the site is 30 mph.
- 3rd Street is a two-lane, north-south, minor collector currently constructed from M Street in the south to G Street SW in the north. The posted speed limit in the vicinity of the site is 30 mph.
- 6th Street is a four-lane, north-south, minor collector currently constructed from Water Street in the south to G Street SW in the north. The posted speed limit in the vicinity of the site is 30 mph.
- 7th Street is a four-lane, north-south, major collector currently constructed from Water Street SW to the south and terminates at New Hampshire Avenue NW in the north. The posted speed limit in the vicinity of the site is 30 mph.



- Makemie Place is a two-lane, north-south/east-west, minor road currently constructed from Eye Street in the north to 6th Street SW in the west. The posted speed limit in the vicinity of the site is 25 mph.
- K Street is a two-lane, east-west, minor collector currently constructed from Wesley Place SW to the west and terminates at 5th Street SE in the east. The posted speed limit in the vicinity of the site is 30 mph.

Figure 2 illustrates the existing roadway network with the current lane configuration and traffic control devices.

Public Transportation

WMATA Metrorail

The Waterfront-SEU Metro Station is located at the southern end of the site. The station is located on the northeast corner of 4th and M Streets SW and services the Green Line (with service between Branch Avenue and Greenbelt).

WMATA Metrobus

A number of Metrobus routes are within walking distance of the site. These routes include the following:

- *Georgia Avenue – 7th Street Line (Routes 70 and 71)*
The Georgia Avenue – 7th Street Line services seven Metrorail stations including the Silver Spring station, Georgia Ave-Petworth station, Mount Vernon Square/7th Street-Convention Center station, Gallery Place-Chinatown station, Archives-Navy Memorial-Penn Quarter station, L’Enfant Plaza station, and the Waterfront-SEU station. The Georgia Avenue – 7th Street Line also services several locations which include the Walter Reed Army Medical Center, Brightwood, Parkview, Howard University, Fort McNair, and Buzzard Point (71).
- *Anacostia – Congress Heights Line (Routes A42, A46 and A48)*
The Anacostia – Congress Heights Line provides service to the Southern Avenue station (A42), and the Anacostia Station, as well as the Greater Southeast Community Hospital (A42), Livingston (A46, A48), Wheeler Road (A46), Congress Heights, Martin Luther King Jr. Ave. SE, the Navy Yard, Waterside Mall, and the Archives.
- *South Capitol Street Line (Routes A9)*
Route A9 provides service to several localities which include Livingston, Bolling Air Force Base (Main Gate), Naval District Washington-Anacostia Annex, the Waterfront-SEU station, and L’Enfant Plaza station.



- *Anacostia – Eckington Line (Routes P1 and P2)*

The Anacostia – Eckington Line serves the Anacostia and Navy Yard Metro stations. It also provides service to Waterside Mall, Archives, and Potomac Park/State Department.

- *Minnesota Avenue – M Street Line (Routes V7, V8 and V9)*

The Minnesota Avenue – M Street Line serves several Metro stations including the Deanwood station, Minnesota Avenue station, Potomac Avenue station, Navy Yard station, Waterfront-SEU station, L’Enfant Plaza station. It also serves Benning Heights, the Department of Agriculture, the Bureau of Engraving, and the Archives at 9th and Constitution Avenue NW.

Washington DC Circulator

The DC Circulator is the newest bus service operating in Washington, DC. Three routes serve Downtown: a North/South route travels between the Washington Convention Center and the Southwest Waterfront provides nearby access to the proposed Waterfront development site; an East/West route travels from Union Station to Georgetown; and a circular route travels around the National Mall from the National Gallery of Art to the World War II Memorial. The DC Circulator has its nearest stop to the project site near 6th Street and M Street SW along the Convention Center – SW Waterfront route.

Existing Traffic Volumes

In order to determine the weekday peak hour turning movement volumes, traffic counts were conducted on Wednesday, August 30, 2006, Wednesday, September 6, 2006, and Tuesday, September, 12, 2006 from 6:00 a.m. to 9:00 a.m. and from 4:00 p.m. to 7:00 p.m. at the intersections contained within the study area. Analysis of the existing traffic data determined the following peak hours:

- AM Peak Hour – 7:30 AM to 8:30 AM
- PM Peak Hour – 4:45 PM to 5:45 PM

The existing weekday morning and afternoon peak hour traffic volumes for the intersections contained within the study area are shown in Figure 3. The existing turning movement counts are included in the Technical Appendix.

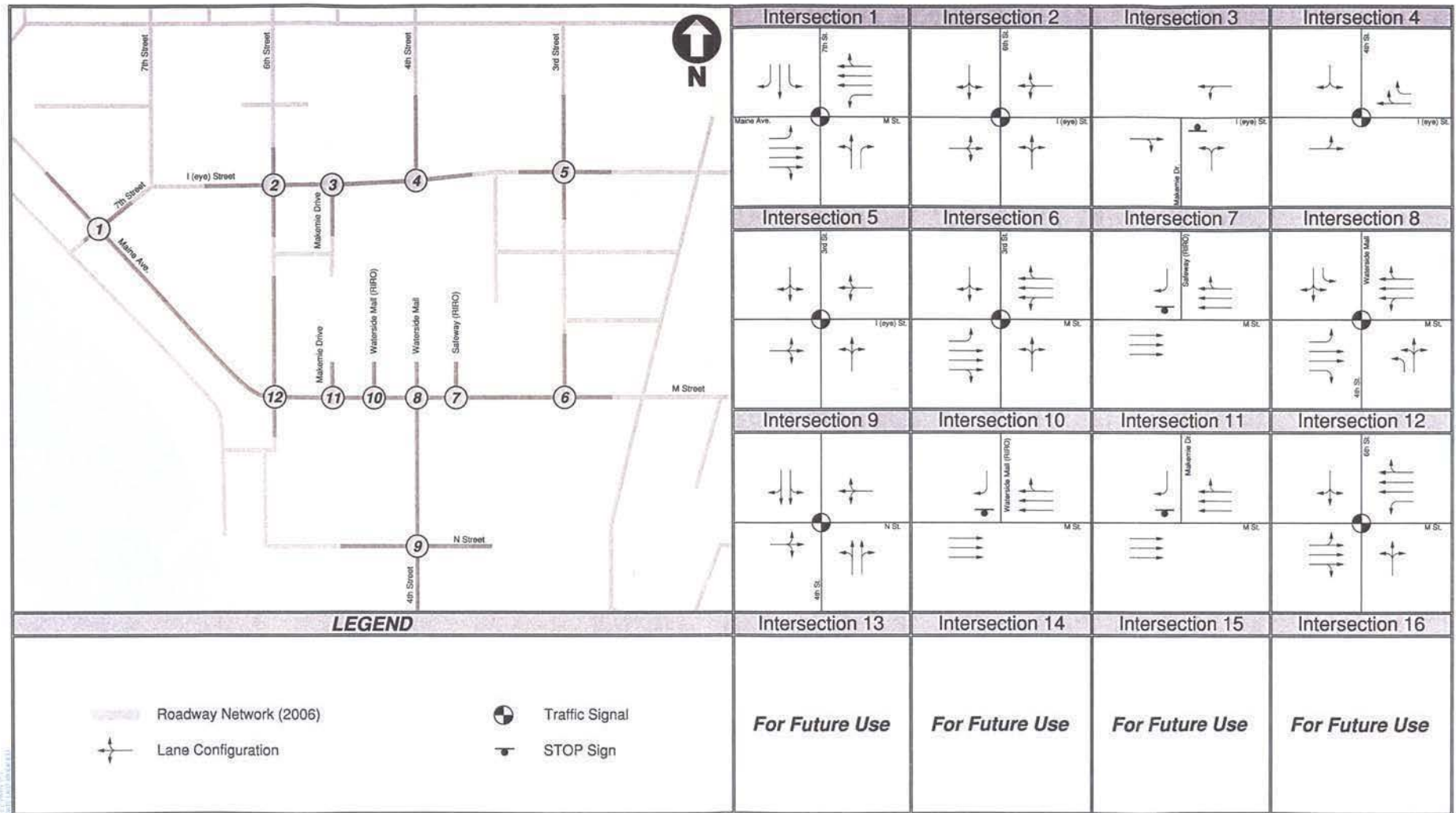


Figure 2
Existing (2006) Local Roadway Network

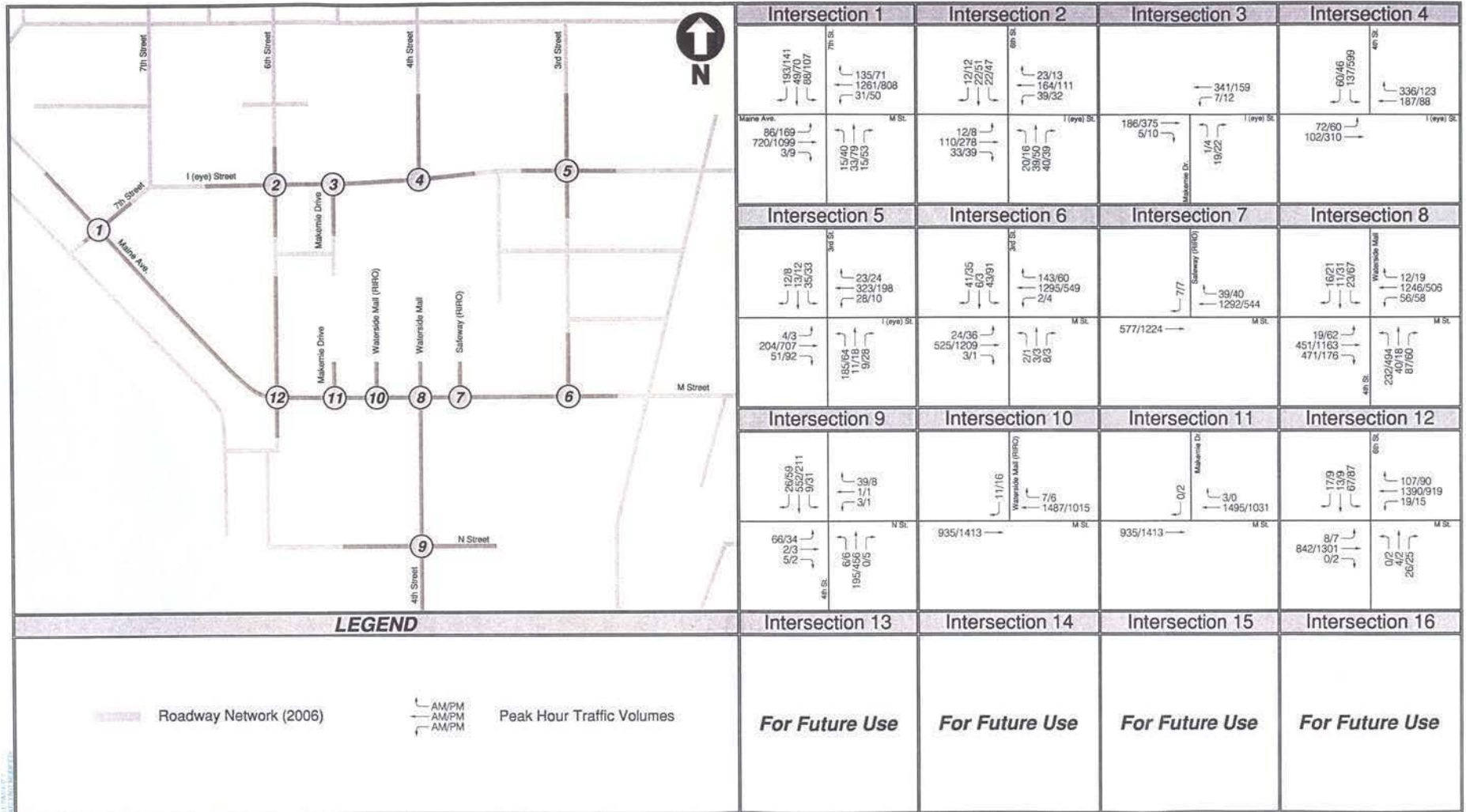


Figure 3 Existing Conditions (2006) Volumes



Existing Conditions Capacity Analysis and Results

Capacity analyses were performed at the intersections contained within the study area during the weekday morning and afternoon peak hours under the existing conditions. Intersection capacity analyses were performed using *Synchro, version 6.0* with results based on the Highway Capacity Manual (HCM 2000) methodology.

The results of the intersection capacity analyses under the existing conditions are presented in Table 1, and are expressed in terms of level of service (LOS) and delay (in seconds per vehicle). A description of the different LOS and delay as well as the detailed analysis worksheets for this scenario is included in the Technical Appendix.

Table 1: Existing Conditions (2006) Capacity Analysis

Intersection (Approach/Movement)	Existing Conditions (2006)			
	AM Peak Hour		PM Peak Hour	
	LOS	Delay	LOS	Delay
Maine Avenue and 7 th Street (Signalized)				
Overall	B	17.4	C	22.0
Eastbound Approach	C	26.9	C	28.6
Westbound Approach	C	28.0	C	28.9
Northbound Approach	B	16.3	C	27.1
Southbound Approach	B	14.3	B	15.7
I Street and 6 th Street (Signalized)				
Overall	B	15.0	B	18.0
Eastbound Approach	A	4.0	A	7.7
Westbound Approach	A	7.0	A	7.5
Northbound Approach	D	39.5	D	49.1
Southbound Approach	C	34.6	C	31.0
I Street and Makemie Drive (Unsignalized)				
Overall	N/A	N/A	N/A	N/A
Westbound Left Turn Movement	A	0.2	A	0.7
Northbound Approach	A	9.6	B	11.4
I Street and 4 th Street (Signalized)				
Overall	A	9.0	D	35.9
Eastbound Approach	A	5.6	B	17.3
Westbound Approach	A	2.0	A	3.9
Southbound Approach	C	30.3	E	57.2
I Street and 3 rd Street (Signalized)				
Overall	C	21.0	C	34.3
Eastbound Approach	C	24.9	D	44.1
Westbound Approach	B	16.4	B	14.1
Northbound Approach	C	25.4	B	13.2
Southbound Approach	B	17.8	B	17.7



Intersection (Approach/Movement)	Existing Conditions (2006)			
	AM Peak Hour		PM Peak Hour	
	LOS	Delay	LOS	Delay
M Street and 3rd Street (Signalized)				
Overall	B	16.0	B	18.6
Eastbound Approach	B	18.4	C	21.5
Westbound Approach	B	15.4	B	11.5
Northbound Approach	C	26.8	C	26.8
Southbound Approach	A	9.9	C	23.5
M Street and Safeway (RIRO)				
Overall	N/A	N/A	N/A	N/A
Southbound Approach	A	9.1	A	9.1
M Street and 4th Street (Signalized)				
Overall	D	35.8	C	21.9
Eastbound Approach	D	41.3	A	9.9
Westbound Approach	C	30.2	B	19.1
Northbound Approach	D	41.3	D	49.8
Southbound Approach	D	40.1	D	43.4
4th Street and N Street (Signalized)				
Overall	A	6.2	A	4.2
Eastbound Approach	D	39.5	D	36.8
Westbound Approach	C	35.0	C	34.6
Northbound Approach	A	2.9	A	3.3
Southbound Approach	A	1.1	A	0.5
M Street and Waterside Mall (RIRO)				
Overall	N/A	N/A	N/A	N/A
Southbound Approach	A	9.2	A	9.9
M Street and Makemie Drive (RIRO)				
Overall	N/A	N/A	N/A	N/A
Southbound Approach	A	0.0	A	10.0
M Street and 6th Street (Signalized)				
Overall	A	5.3	B	10.6
Eastbound Approach	A	8.5	B	10.2
Westbound Approach	A	1.5	A	7.7
Northbound Approach	C	25.5	C	25.5
Southbound Approach	C	30.5	D	39.5

Note: N/A means not available.

Level of Service (LOS) D is typically used as the acceptable LOS threshold in the District; although LOS E and F are sometimes accepted in certain highly urbanized areas. The results presented in Table 1 show that all study intersections are currently operating at acceptable levels. Figure 4 illustrates graphically the intersection capacity analysis results under the existing conditions.

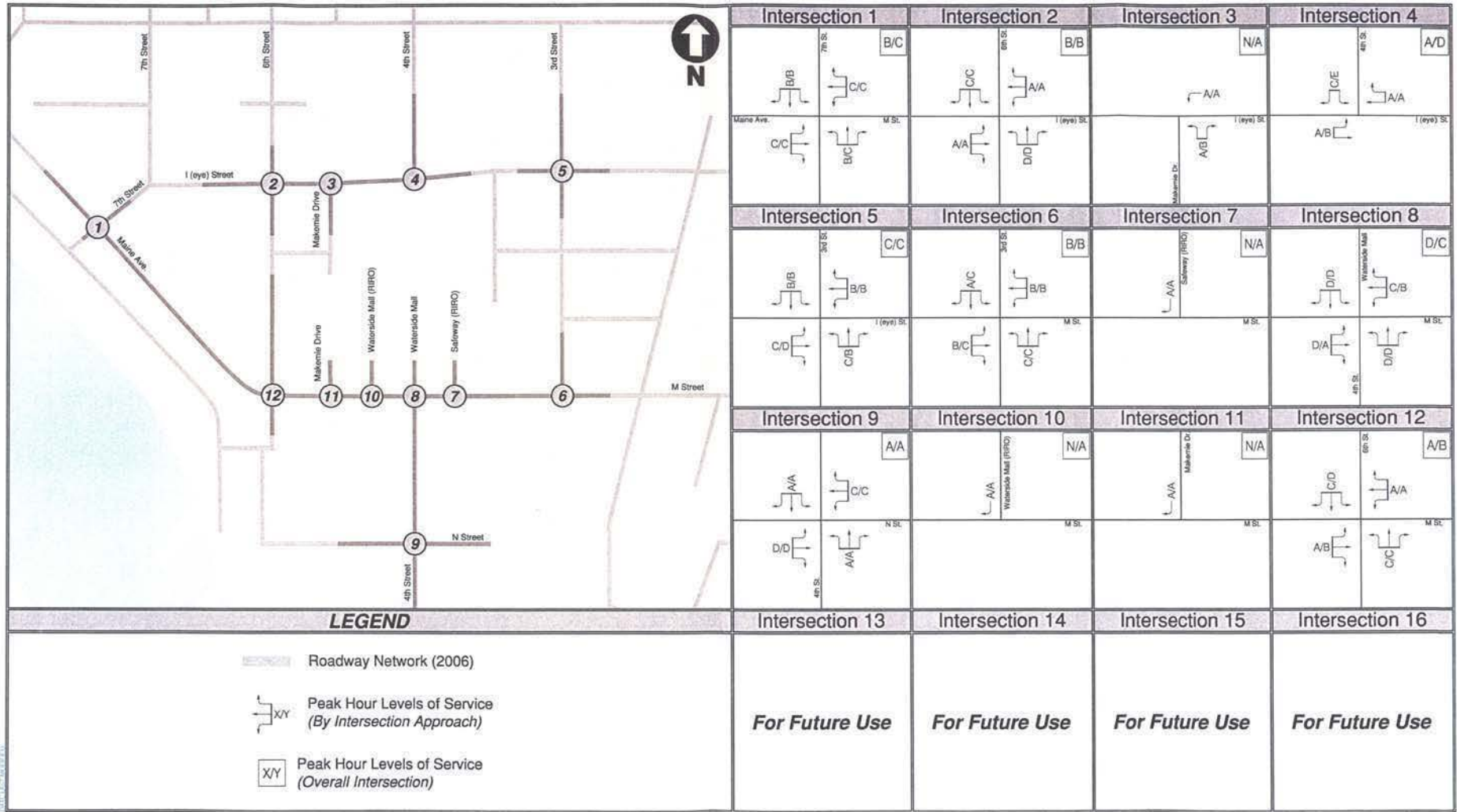


Figure 4 Existing Conditions (2006) Levels of Service



FUTURE CONDITIONS WITHOUT DEVELOPMENT (2010)

The future conditions without development are a basis for comparison to the future conditions with the proposed redevelopment of Waterside Mall. With this comparison, it is possible to investigate the impact of the proposed project on the roadway network. In order to develop background traffic forecasts (or future traffic forecasts without the development), a composite of existing traffic, regional growth, and traffic generated by other planned local background developments was used. It was assumed for purposes of analysis that the interim conditions for the Waterfront development would be occupied in 2010.

Future Conditions without Development Traffic Volumes

Typically, future traffic volumes are projected by increasing existing traffic volumes to the interim and full build-out years using a growth rate based on historical traffic growth. Based on previous studies performed in the area (i.e. *Marina View – Traffic Impact Study* and *Discussion of Additional Analysis* prepared by Gorove/Slade Associates on December 4, 2006 and February 23, 2007, respectively), an inherent growth rate of one percent (1%) compounded annually over a four-year period, or a total of 4.06% to the existing volumes, was applied on the major roadways and movements to account for regional growth within the development area.

The project is located several blocks from the new baseball stadium that is currently under construction. The new stadium has sparked the development of several other parcels in the area as well, such as the United States Department of Transportation (USDOT) Headquarters, Monument Ballpark, Southeast Federal Center (SEFC/The Yards), Capper/Carrollburg, Marina View, Town Center Redevelopment, Southwest Waterfront, and Florida Rock Planned Unit Development (PUD). In addition to the regional growth, traffic generated by these planned local background developments was considered in this study. A description of these developments is presented in Table 2 with the location, trip distribution, and assignment for each planned background development under the interim and full build-out years included in the Technical Appendix.

**Table 2: Planned Background Developments**

Planned Background Development	Project Description	
	Interim Year (2010)	Full Build-Out Year (2020)
USDOT Headquarters*	<ul style="list-style-type: none"> - Relocate existing headquarters to the SEFC site to accommodate at least 5,500 employees. - Redevelop Building 170 to include approximately 13,500 square feet of retail space. 	<ul style="list-style-type: none"> - Relocate existing headquarters to the SEFC site to accommodate at least 5,500 employees. - Redevelop Building 170 to include approximately 13,500 square feet of retail space.
Monument Ballpark	<ul style="list-style-type: none"> 330 condominiums 288,285 square feet of office 196 room hotel 60,000 square feet of retail 	<ul style="list-style-type: none"> 1,211 condominiums 736,495 square feet of office 196 room hotel 127,856 square feet of retail
SEFC/The Yards*	<ul style="list-style-type: none"> 1,165 condominiums/townhouses 870 apartments 450,000 square feet of office 125,000 square feet of retail 	<ul style="list-style-type: none"> 2,007 condominiums/townhouses 870 apartments 1,980,000 square feet of office 371,000 square feet of retail
Capper Carrollsburg*	<ul style="list-style-type: none"> 840 apartments 	<ul style="list-style-type: none"> 840 apartments
Marina View	<ul style="list-style-type: none"> 556 apartments 8,300 square feet of retail 	<ul style="list-style-type: none"> 556 apartments 8,300 square feet of retail
Town Center Redevelopment	<ul style="list-style-type: none"> 253 apartments 	<ul style="list-style-type: none"> 253 apartments
Southwest Waterfront	<ul style="list-style-type: none"> 800 apartments 87,000 square feet of office 230,000 square feet of retail 400 room hotel 200,000 square feet of cultural resource 	<ul style="list-style-type: none"> 800 apartments 87,000 square feet of office 230,000 square feet of retail 400 room hotel 200,000 square feet of cultural resource
Florida Rock PUD	<ul style="list-style-type: none"> No development under this phase 	<ul style="list-style-type: none"> 160 apartments 603,446 square feet of office 62,516 square feet of retail 240 room hotel

Note: * For the purpose of this analysis, only 10% of these background trips were assigned along M Street based on previous studies performed in the area.

The inherent background growth and the traffic generated by the planned local background developments listed above under the interim 2010 year were added to the existing volumes in order to estimate the future conditions without development traffic volumes as shown in Figure 5.

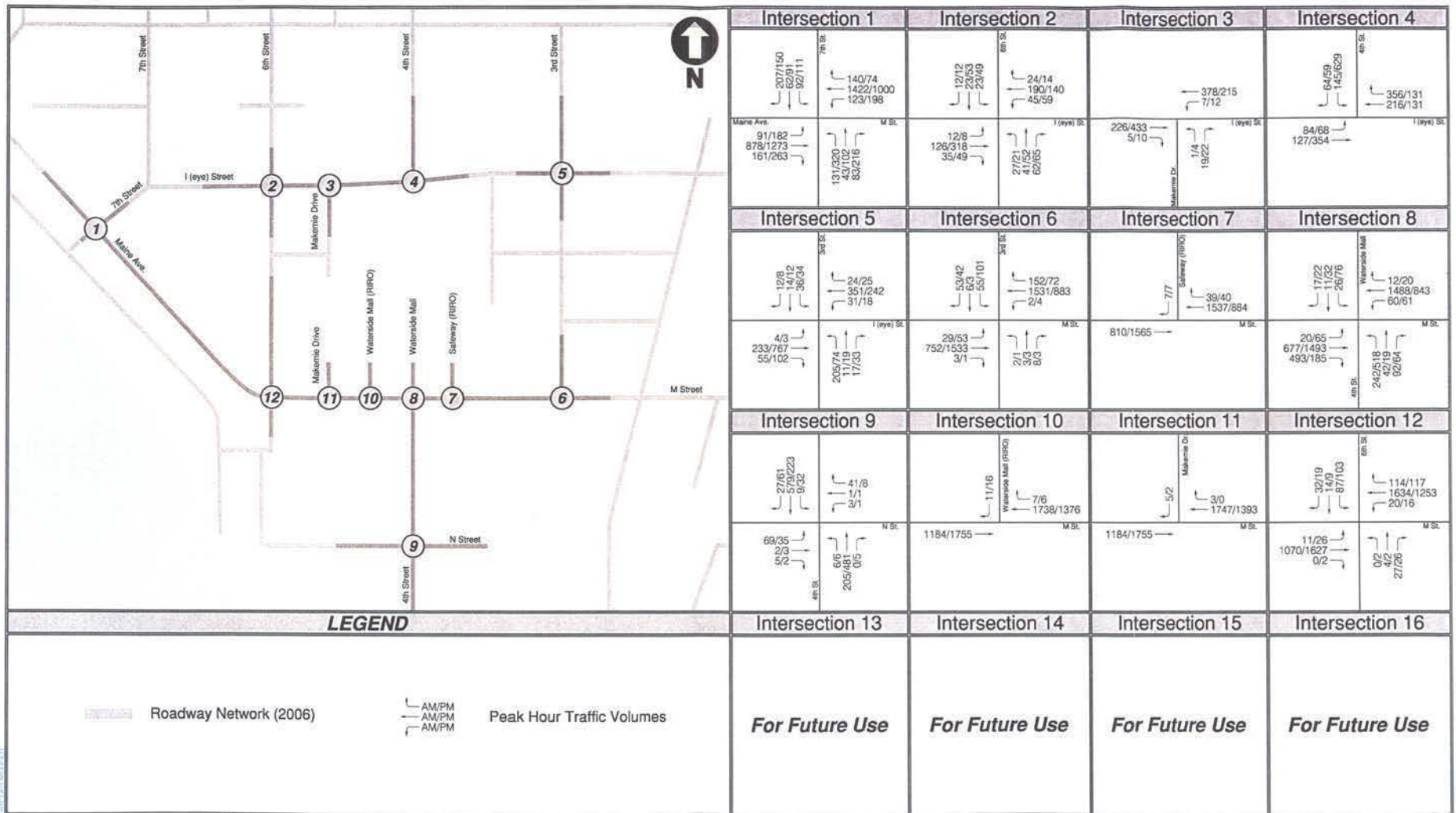


Figure 5 Future Conditions without Development (2010) Volumes



Future Conditions without Development Capacity Analysis and Results

Capacity analyses were performed at the intersections contained within the study area during the morning and afternoon peak hours under the future conditions without development. The results of the intersection capacity analyses are presented in Table 3, and are expressed in terms of level of service (LOS) and delay (in seconds per vehicle). The detailed analysis worksheets are contained in the Technical Appendix.

Table 3: Future Conditions without Development (2010) Capacity Analysis

Intersection (Approach/Movement)	Future Conditions without Development (2010)			
	AM Peak Hour		PM Peak Hour	
	LOS	Delay	LOS	Delay
Maine Avenue and 7th Street (Signalized)				
Overall	B	17.8	D	49.7
Eastbound Approach	C	31.9	F	131.5
Westbound Approach	C	25.6	F	135.9
Northbound Approach	B	15.4	C	26.7
Southbound Approach	B	15.9	B	18.7
Overall Mitigations - Adjust PM signal timings	B	17.8	C	34.2
Eastbound Approach	C	31.9	C	34.3
Westbound Approach	C	25.6	C	25.3
Northbound Approach	B	15.4	D	38.0
Southbound Approach	B	15.9	C	33.2
I Street and 6th Street (Signalized)				
Overall	B	16.9	B	18.3
Eastbound Approach	A	8.6	A	8.7
Westbound Approach	A	7.6	A	8.3
Northbound Approach	D	38.8	D	49.0
Southbound Approach	C	34.6	C	31.3
I Street and Makemie Drive				
Overall	N/A	N/A	N/A	N/A
Westbound Left Turn Movement	A	0.2	A	0.6
Northbound Approach	A	9.9	B	12.2
I Street and 4th Street (Signalized)				
Overall	A	8.7	D	46.2
Eastbound Approach	A	3.4	B	16.6
Westbound Approach	A	2.2	A	4.8
Southbound Approach	C	31.6	F	80.1
Overall Mitigations - Adjust PM signal timings	A	8.7	C	29.9
Eastbound Approach	A	3.4	B	14.6
Westbound Approach	A	2.2	A	4.0
Southbound Approach	C	31.6	D	49.1



Intersection (Approach/Movement)	Future Conditions without Development (2010)			
	AM Peak Hour		PM Peak Hour	
	LOS	Delay	LOS	Delay
I Street and 3rd Street (Signalized)				
Overall	C	21.8	D	39.8
Eastbound Approach	C	23.6	D	52.5
Westbound Approach	B	17.1	B	15.1
Northbound Approach	C	28.8	B	16.7
Southbound Approach	B	17.9	B	17.7
M Street and 3rd Street (Signalized)				
Overall	B	18.3	B	19.9
Eastbound Approach	C	20.8	C	23.6
Westbound Approach	B	17.3	B	12.9
Northbound Approach	C	26.8	C	26.8
Southbound Approach	B	15.9	C	24.6
M Street and Safeway Drive				
Overall	N/A	N/A	N/A	N/A
Southbound Approach	A	9.4	A	9.1
M Street and 4th Street (Signalized)				
Overall	C	31.6	C	32.7
Eastbound Approach	C	27.9	C	30.0
Westbound Approach	C	31.6	C	23.5
Northbound Approach	D	42.3	D	52.5
Southbound Approach	D	40.3	D	43.6
4th Street and N Street (Signalized)				
Overall	A	6.3	A	4.4
Eastbound Approach	D	39.9	D	36.9
Westbound Approach	C	35.0	C	34.6
Northbound Approach	A	2.9	A	3.3
Southbound Approach	A	1.3	A	1.1
M Street and Waterside Mall (RIRO)				
Overall	N/A	N/A	N/A	N/A
Southbound Approach	A	9.5	A	10.0
M Street and Makemie Drive (RIRO)				
Overall	N/A	N/A	N/A	N/A
Southbound Approach	A	9.4	A	10.0
M Street and 6th Street (Signalized)				
Overall	A	5.8	B	10.3
Eastbound Approach	A	8.9	B	11.7
Westbound Approach	A	1.6	A	6.1
Northbound Approach	C	25.5	C	25.6
Southbound Approach	C	32.0	D	35.6

Note: N/A means not available.



As mentioned previously, LOS D is typically used as the acceptable LOS threshold in the District; although LOS E and F are sometimes accepted in certain highly urbanized areas. The results presented in Table 3 show that all study intersections would operate at acceptable levels of service under the future conditions without development, except at the intersections of Maine Avenue with 7th Street and I Street with 4th Street. Adjusting the PM signal timings as part of DDOT's routine maintenance at these locations will mitigate this deficiency. Figure 6 illustrates graphically the intersection capacity analysis results under the future conditions without development.

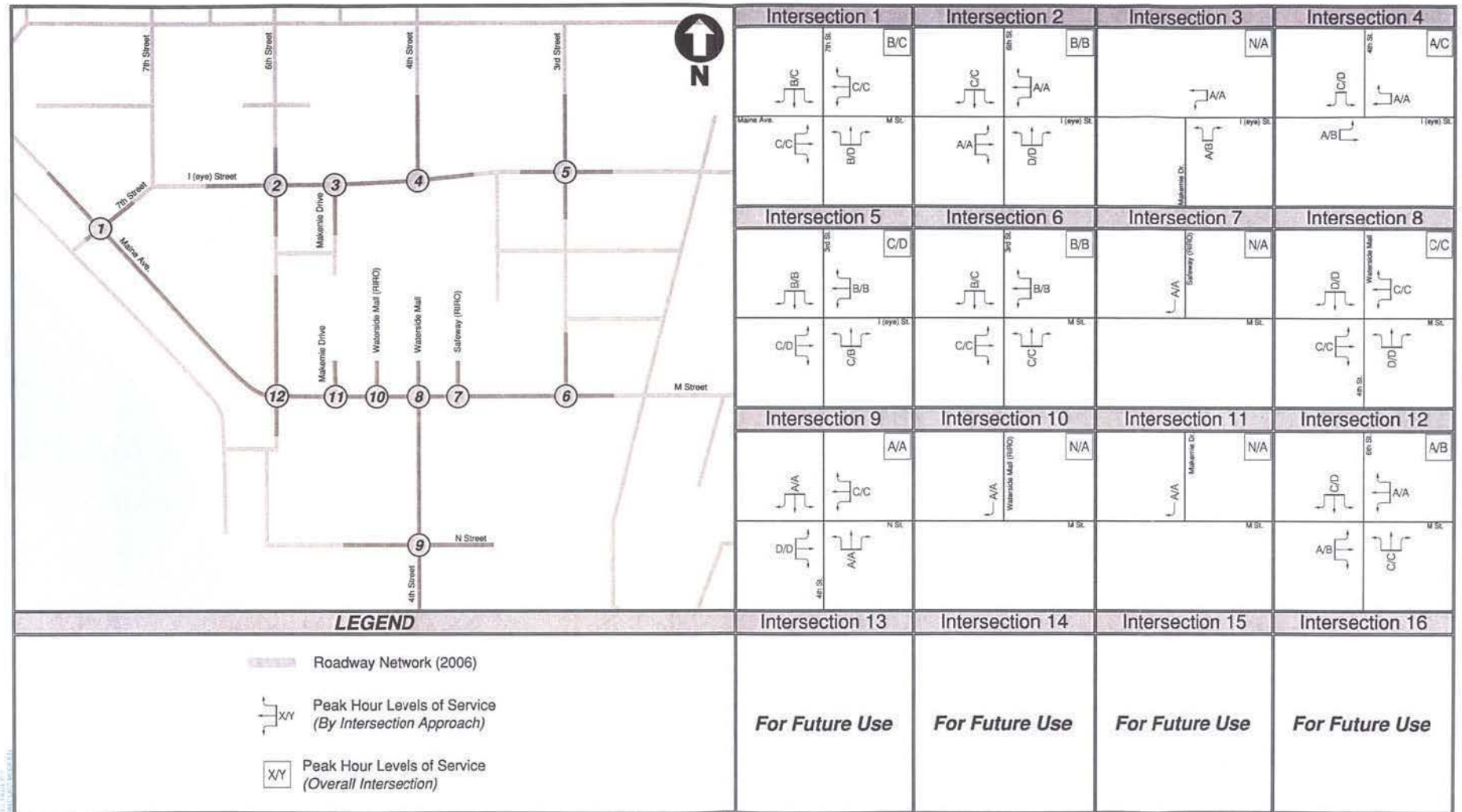


Figure 6 Future Conditions without Development (2010) Levels of Service



FUTURE CONDITIONS WITH INTERIM YEAR DEVELOPMENT (2010)

Interim Description

The Stage II PUD (build year 2010) of the proposed Waterfront Development will consist of approximately 360 residential dwelling units, 544,695 square feet of office, a 55,000 square foot grocery store, and 20,205 square feet of ground floor retail. The project site is bounded by M Street to the south, 6th Street/Makemie Place to the west, Eye Street to the north, and 3rd Street/Wesley Place to the east. The interim development of the project was assumed to be complete in 2010.

Roadway Network Improvements

Connection of 4th Street

The Waterfront development will fulfill the Center City Action Agenda goal of reconnecting 4th Street SW to increase street activity and maximizing the vibrant connection from the National Mall to the SW Waterfront. By connecting 4th Street SW and providing internal road improvements, the Waterfront project will:

- Maximize the use of multi-modal transportation options;
- Spread the traffic volume more efficiently through an improved grid system; and
- Manage the flow of traffic through key intersections and high-volume corridors.

The connection of 4th Street SW is split into two sections, the “applicant piece” and the “park piece.” The applicant’s portion of the 4th Street connection extends from K Street in the north to M Street in the south. The extension of 4th Street through the park is the responsibility of the park owner. The construction will be coordinated between the District and the Applicant to ensure re-connection of 4th Street to the street grid.

In order to determine an appropriate cross-section for the new connection of 4th Street from M Street in the south to Eye Street in the north, existing traffic volumes were redistributed along 4th Street based on regional traffic patterns, local average daily traffic volumes, and peak hour turning movement traffic volumes within the vicinity of the site. A newly designed 4th Street was developed based on the redistributed traffic volumes along 4th Street. The 4th Street connection from M Street to Eye Street will consist of a 55-foot cross section. This cross section will allow for two parking lanes, two bicycle lanes, two through lanes (one northbound and one southbound), and one left turn lane/bay. Each vehicular travel lane will be approximately 10 to 10.5 feet in width pending final design approval by DDOT. The 55-foot cross section from north to south will allow both ends of the new 4th Street connection to align with the existing 4th Street cross section.

The new lane configuration at the 4th Street and M Street intersection is proposed to have one southbound left turn lane and one southbound shared left-through-right turn lane. All other approaches to the intersection will maintain existing lane geometry. The proposed lane configuration



at the 4th Street and Eye Street intersection will allow for one through-right turn lane and one left turn lane along both the northbound and southbound approaches along 4th Street with Eye Street remaining as existing conditions along the eastbound and westbound approaches.

Redistributed Existing Traffic Volumes

In order to determine the peak hour turning movement traffic volumes with the newly constructed 4th Street from M Street in the south to Eye Street in the north, existing traffic volumes were redistributed along 4th Street based on regional traffic patterns, local average daily traffic volumes and peak hour turning movement traffic volumes within the vicinity of the site.

Pedestrian Accommodations and Traffic Calming along 4th Street

A large 40-foot raised crosswalk/speed table is proposed along 4th Street located approximately 375 feet north of M Street, or approximately 215 feet north of the Waterfront-SEU Metro station porthole. The speed table will be one of several traffic calming measure in the corridor, along with narrow vehicle travel lanes and bulb-outs located at M Street, Eye Street, and at the northern site entrance. Bulb-outs shorten the distance that pedestrians must travel to cross the roadway and reduces the amount of pedestrian clearance time during a signal phase. This increases pedestrian safety by having them spend less time in the roadway sharing space with vehicles. Bulb-outs also have an effect on driver behavior, as they help visually narrow the street section causing drivers to instinctively slow their speed through the intersection.

It has been suggested by the District’s Office of Planning to include a crosswalk across 4th Street at the Metro station porthole, near the private driveways accessing the proposed site. The Applicant is working with the Office of Planning and the District Department of Transportation to determine whether a crosswalk is appropriate at this location.

M Street Changes due to 4th Street Connection

The M Street corridor will not be altered for the purposes of this report with the exception of the 4th Street and M Street intersection. A median break was assumed at the East M Street Office Building site entrance, located just east of 4th Street. This median break was approved by DDOT in their report as part of the 2002/2003 Stage 1 PUD process. The median break would help alleviate possible vehicular circulation issues within the vicinity of the site as well as help discourage any possible U-Turn traffic at the up stream and downstream signals. A median break along M Street may also help relieve any congestion at the 4th Street and M Street intersection.

Site Access and Vehicular Circulation

Currently, general access to the site is provided from M Street and 6th Street/Wesley Street. This access will be maintained throughout the redevelopment along with access proposed along the planned



extension of 4th Street from M Street in the south to Eye Street in the north. Additional access in the future will be provided by three site entrances on 4th Street and two access points on the western border of the site on Makemie Place. A memorandum describing and justifying the curb cuts along M Street was prepared and submitted to DDOT in April 2007, and is included in the Appendix.

The Waterfront plan will include an enhanced external and internal street network, which is highlighted by the extension of 4th Street SW through the site from I Street SW to M Street SW. Other internal road improvements will include the following:

- Two-way private drive to the north running east-west from Makemie Place SW to Wesley Place SW;
- Two-way private drive extension of Makemie Place SW along the west side of the site;
- Two-way private drive access to loading zones from Wesley Place SW along east side of the site;
- One-way West Plaza access drive from 4th Street SW to Makemie Place SW private drive extension; and
- One-way East Plaza access drive from 4th Street SW curving south to M Street SW.

Parking garage entrances and truck loading zones are located away from 4th Street SW and dispersed throughout the site. Truck loading zones are located along the extended private drives to the east, and west of the site. Parking garage entrances are located to minimize impact of curb cuts, but to maximize ease of access to each building.

Pedestrian/Bicycle Network Circulation

The Waterfront development plan includes a strong streetscape component to create pedestrian and bicycling linkages within the site activity centers, such as the multi-modal Metrorail station and connecting along 4th Street SW. Further pedestrian connections will occur along M Street SW to better link adjacent neighborhoods and rekindle the vibrancy of the redevelopment.

Building entrances are focused along the main streetscape linkages along M Street SW and 4th Street SW. The Waterfront development plans include a unified streetscape feature and establishing street-level retail activity with lively storefronts located close enough to primary roadways to make pedestrians feel secure, but large enough to provide an adequate buffer from traffic, space for the streetscape elements such as street trees, pedestrian-scaled streetlights, seating, bicycle racks, trash receptacles, and outdoor dining at appropriate locations. Pedestrians will be further protected by curbside parking adjacent to most sidewalks and sidewalk bump-outs at most intersections will shorten the street crossing distances for pedestrians.



The Waterfront development gives the pedestrian and bicyclist the highest priority with shared pathways to the buildings, on-street parking areas, and off-street parking structures, as well as ample bicycle parking facilities.

The design for the new 4th Street SW is consistent with the District of Columbia Bicycle Master Plan as a proposed signed bike route with bike lanes. This development plan will be conducive to bicycle travel in an appealing urban ambiance that will feed into direct on-street connections to the proposed nearby Anacostia Riverwalk Trail.

Interim Year Development Site Generated Volumes

In order to calculate the trip generation for the proposed development, the ITE's Trip Generation, 7th Edition publication was used to determine the trips into and out of the proposed site for the weekday morning and afternoon peak hours. It was assumed that 20,205 square feet of ground floor retail proposed for the site will be supported by pedestrians and the public transportation in the area, and was assumed to not generate any vehicular trips to the site. This is typical of ground floor retail use within the District. To account for the Waterfront-SEU Metro Station located at the development site, the WMATA 2005 Development-Related Ridership Survey was used to determine an appropriate vehicle trip reduction rate for alternative modes of transportation. Table 4 presents the total new development trips generated in the first horizon year of the proposed Waterfront development.

Table 4: Stage II PUD Site Trip Generation (2010)

Land Use	ITE Code	Size	Units	----- Week day -----						
				AM Peak Hour			PM Peak Hour			Daily Total
				In	Out	Total	In	Out	Total	
Apartment Bldg. #1 (WT)	230	180	DU	15	68	83	66	32	98	1,058
Apartment Bldg. #2 (ET)	230	180	DU	15	68	83	66	32	98	1,058
Office Building #1 (West 4th St)	710	283	kSF	381	51	432	68	329	397	2,974
Office Building #3 (East 4th St)	710	261	kSF	357	48	405	64	308	372	2,797
Grocery Store	850	55	kSF	135	85	220	297	285	582	842
<i>Stage II PUD Total Trips without Reduction:</i>				903	320	1,223	561	986	1,547	8,729
<i>Reduction for Alternative Modes: 80%</i>				-722	-256	-978	-449	-789	-1,238	-6,983
STAGE II PUD TOTAL SITE TRIPS				181	64	245	112	197	309	1,746

Future Conditions with Interim Year Development Traffic Volumes

The distribution of site trips was based on existing volumes and anticipated regional traffic patterns. In addition, an assessment of future roadway conditions was used to determine the routes that will provide the most convenient access to the development. The inbound and outbound trips calculated for the morning and afternoon peak hours were routed in the roadway network to the site based on the location of the proposed site and the existing traffic data.



The site traffic assignment for the weekday morning and afternoon peak hours is illustrated in Figure 7. The proposed interim year redevelopment site trips were added to the future without development volumes in order to establish the future with development 2010 traffic volumes as shown in Figure 8.

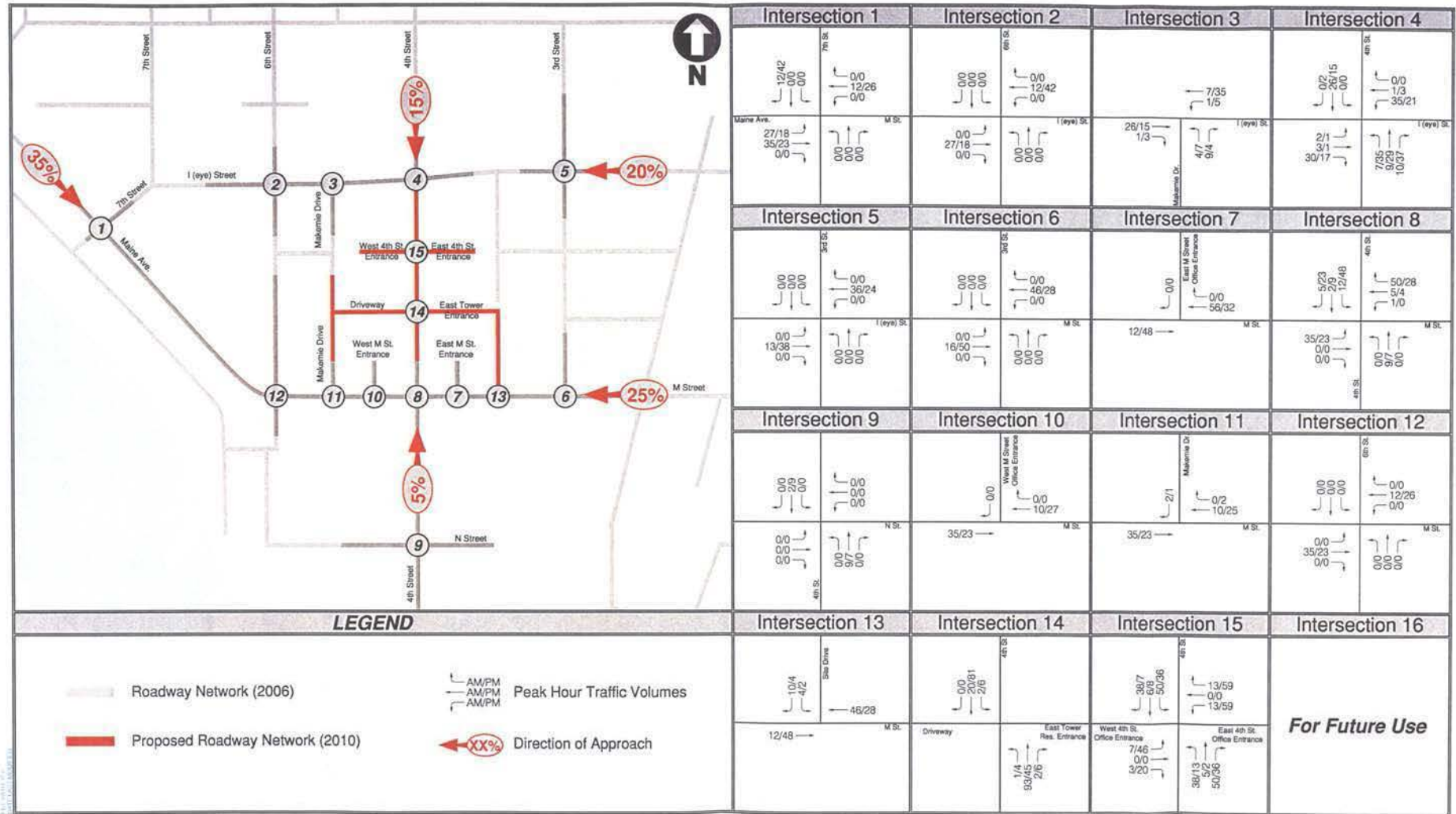


Figure 7
Stage II PUD Site Generated (2010) Volumes and Direction of Approach

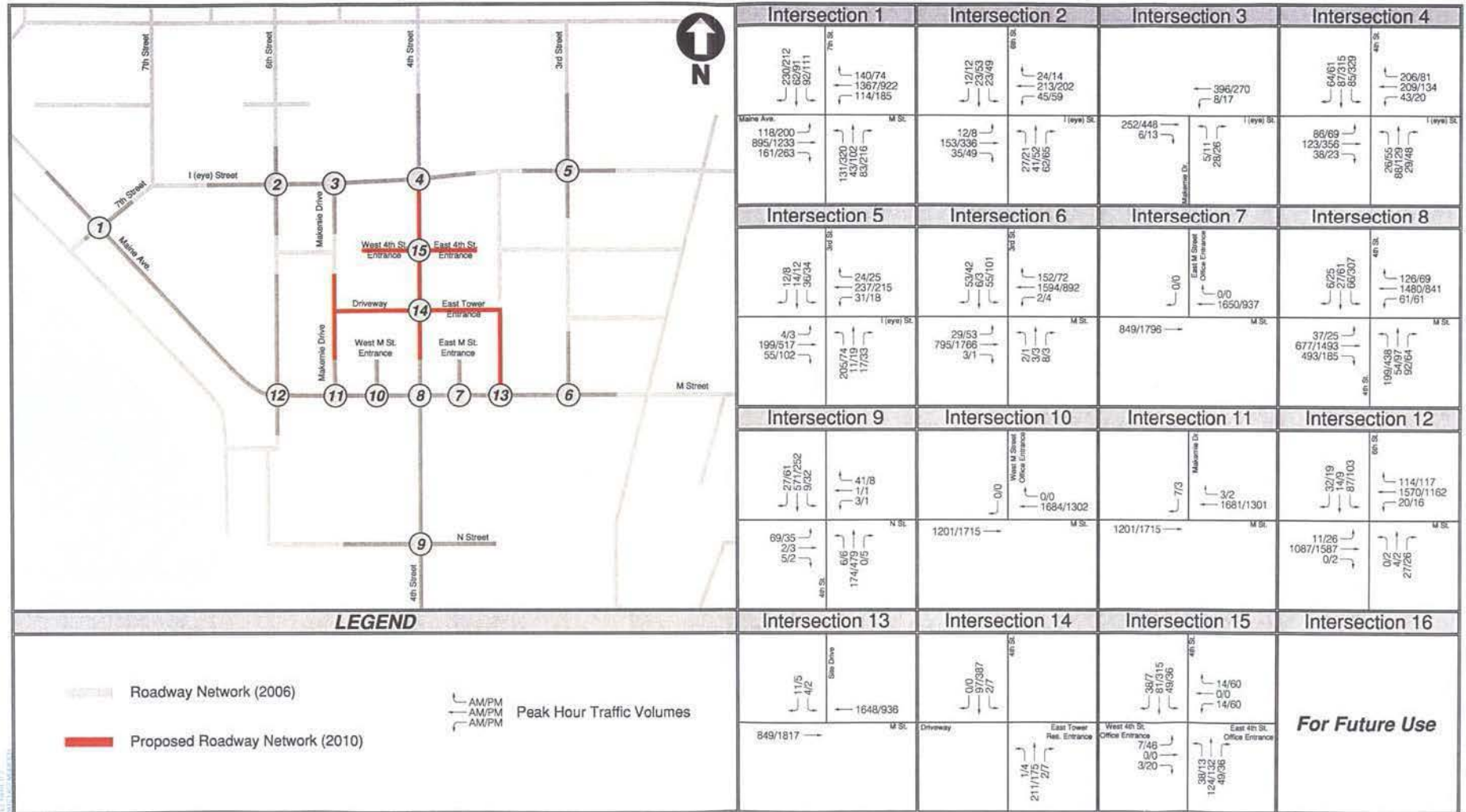


Figure 8
Future Conditions with Interim Year Development (2010) Volumes



Future Conditions with Interim Year Development Capacity Analysis and Results

Capacity analyses were performed at the intersections contained within the study area during the morning and afternoon peak hours under the future conditions with interim year development. The results of the intersection capacity analyses are presented in Table 5, and are expressed in terms of level of service (LOS) and delay (in seconds per vehicle). The detailed analysis worksheets are contained in the Technical Appendix.

Table 5: Future Conditions with Interim Year Development (2010) Capacity Analysis

Intersection (Approach/Movement)	Future Conditions with Interim Year Development (2010)			
	AM Peak Hour		PM Peak Hour	
	LOS	Delay	LOS	Delay
Maine Avenue and 7th Street (Signalized)				
Overall	B	17.0	C	32.6
Eastbound Approach	C	31.9	C	34.3
Westbound Approach	C	24.2	C	23.6
Northbound Approach	B	13.6	D	35.7
Southbound Approach	B	16.1	C	32.0
I Street and 6th Street (Signalized)				
Overall	B	15.3	B	19.5
Eastbound Approach	A	8.3	A	14.0
Westbound Approach	A	6.0	A	7.7
Northbound Approach	D	37.7	D	48.8
Southbound Approach	C	34.6	C	31.3
I Street and Makemie Drive				
Overall	N/A	N/A	N/A	N/A
Westbound Left Turn Movement	A	0.2	A	0.7
Northbound Approach	B	10.8	B	13.6
I Street and 4th Street (Signalized)				
Overall	B	12.8	C	26.1
Eastbound Approach	A	4.2	B	19.6
Westbound Approach	A	7.5	A	6.2
Northbound Approach	C	21.7	D	43.4
Southbound Approach	C	26.7	C	31.1
I Street and 3rd Street (Signalized)				
Overall	C	20.5	C	22.5
Eastbound Approach	B	19.3	C	27.3
Westbound Approach	B	15.1	B	14.6
Northbound Approach	C	29.2	B	17.3
Southbound Approach	B	17.9	B	17.7
M Street and 3rd Street (Signalized)				
Overall	B	18.5	B	19.3
Eastbound Approach	B	19.9	C	22.7
Westbound Approach	B	17.8	B	12.9
Northbound Approach	C	26.8	C	26.8
Southbound Approach	B	17.3	B	19.2



Intersection (Approach/Movement)	Future Conditions with Interim Year Development (2010)			
	AM Peak Hour		PM Peak Hour	
	LOS	Delay	LOS	Delay
M Street and Site Drive #1				
Overall	N/A	N/A	N/A	N/A
Southbound Approach	C	18.8	B	10.2
M Street and East M Street Office Entrance				
Overall	N/A	N/A	N/A	N/A
Southbound Approach	A	0.0	A	0.0
Eastbound Left Turn Movement	A	0.0	A	0.0
M Street and 4th Street (Signalized)				
Overall	C	31.7	D	47.4
Eastbound Approach	C	27.5	C	35.0
Westbound Approach	C	32.7	C	24.0
Northbound Approach	D	39.0	D	53.0
Southbound Approach	D	40.8	F	150.6
Overall Mitigation - Adjust PM signal timings	C	31.7	D	49.4
Eastbound Approach	C	27.5	D	51.5
Westbound Approach	C	32.7	C	31.5
Northbound Approach	D	39.0	E	55.2
Southbound Approach	D	40.8	E	76.1
4th Street and N Street (Signalized)				
Overall	A	6.5	A	4.2
Eastbound Approach	D	39.9	D	36.9
Westbound Approach	C	35.0	C	34.6
Northbound Approach	A	2.9	A	3.3
Southbound Approach	A	1.3	A	0.8
M Street and West M Street Office Entrance (RIRO)				
Overall	N/A	N/A	N/A	N/A
Southbound Approach	A	0.0	A	0.0
M Street and Makemie Drive				
Overall	N/A	N/A	N/A	N/A
Southbound Approach	A	9.6	A	9.6
M Street and 6th Street (Signalized)				
Overall	A	6.0	A	7.9
Eastbound Approach	A	8.9	A	7.3
Westbound Approach	A	1.7	A	5.1
Northbound Approach	C	25.5	C	25.5
Southbound Approach	C	32.2	D	38.7
4th Street and Site Drive #1				
Overall	N/A	N/A	N/A	N/A
Northbound Left Turn Movement	A	7.4	A	8.4
Southbound Left Turn Movement	A	7.7	A	7.6
4th Street and West Tower Entrance/East 4th St. Office Entrance				
Overall	N/A	N/A	N/A	N/A
Eastbound Approach	B	11.5	C	16.9
Westbound Approach	B	10.9	B	14.8
Northbound Left Turn Movement	A	7.5	A	8.2
Southbound Left Turn Movement	A	7.7	A	7.7

Note: N/A means not available.



As mentioned previously, Level of Service (LOS) D is typically used as the acceptable LOS threshold in the District; although LOS E and F are sometimes accepted in certain highly urbanized areas. With the signal timing adjustments recommended in the future conditions without development, the results presented in Table 5 show that all study intersections will operate at acceptable levels of service under the future conditions with interim year development, except at the intersection of M Street with 4th Street. Adjusting the PM signal timings as part of DDOT's routine maintenance at this location will mitigate this deficiency. Figure 9 illustrates graphically the intersection capacity analysis results under this scenario. Figure 10 shows the proposed roadway network with the 4th Street connection.

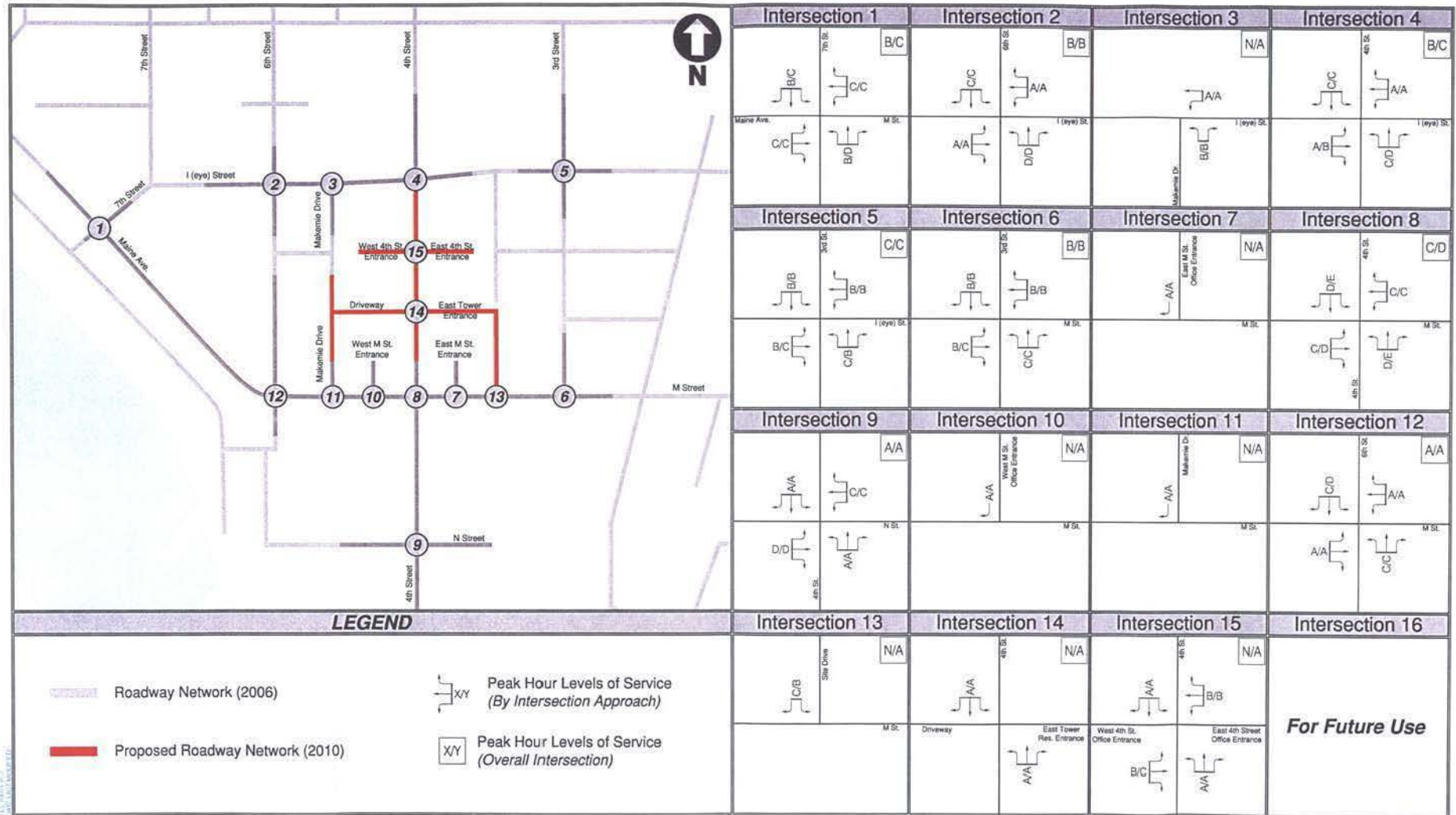


Figure 9 Future Conditions with Interim Year Development (2010) Levels of Service

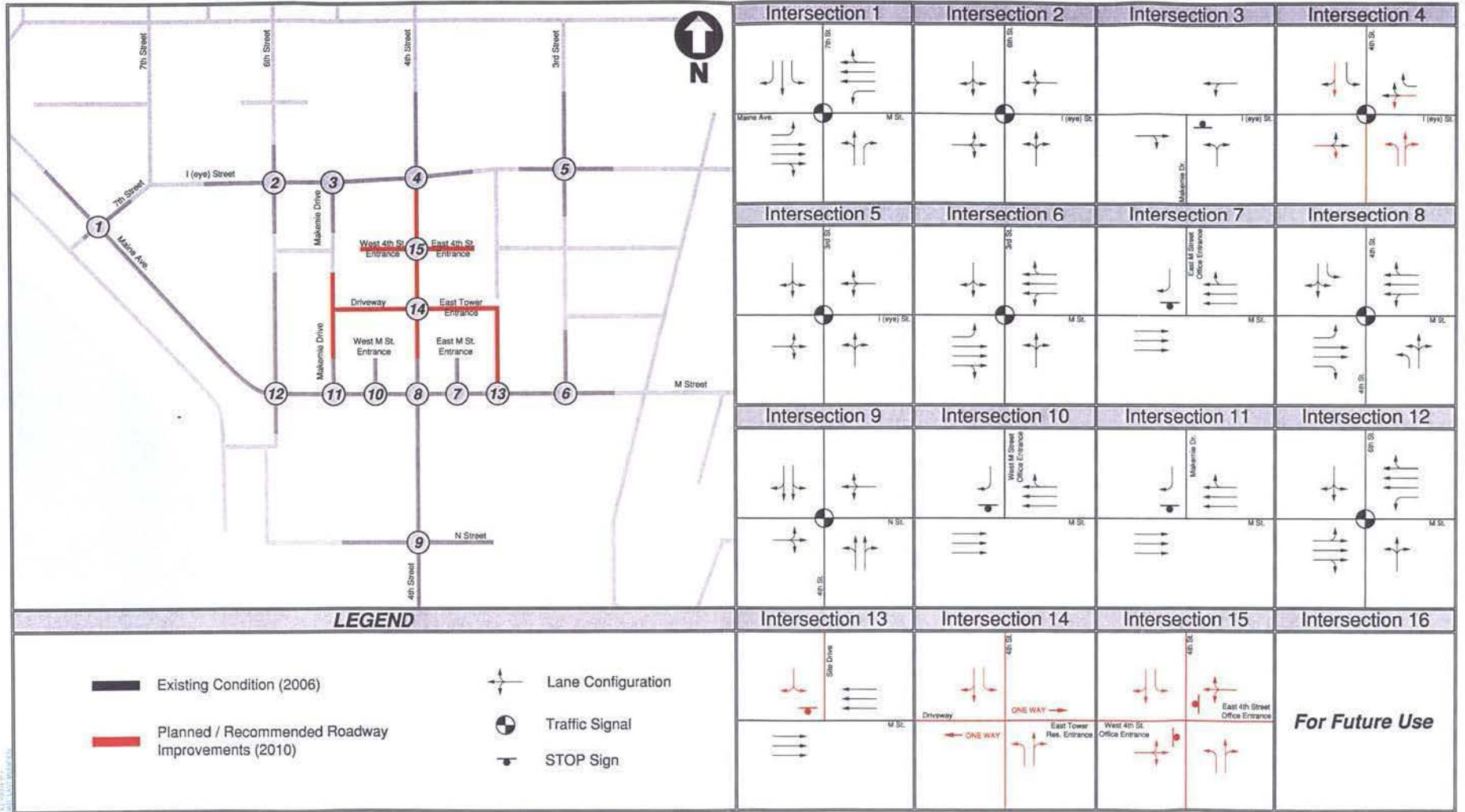


Figure 10
Future Conditions with Interim Year Development (2010) Recommended Improvements.



FUTURE CONDITIONS WITH FULL BUILD-OUT DEVELOPMENT (2020)

Full Build-out Description

The proposed Stage I PUD (build year 2010 to 2020) of the Waterfront development plan consists of approximately 48,850 square feet of ground floor retail, 680 residential dwelling units, and 628,145 square feet of office. Full build-out of the project is anticipated to be complete in the year 2020. At full build-out, the Waterfront development will consist of approximately 1,040 dwelling units, 69,055 square feet of ground floor retail, 1.172 million square feet of office, and a 55,000 square foot grocery store.

The current application is a revision to the Stage 1 PUD application approved in 2002/2003. The application approved back in 2002/2003 envisioned approximately 400 dwelling units, 45,000 square feet of ground floor retail, 2.0 million square feet of office, and a 30,000 square foot grocery store. The current application envisions increasing the residential units and retail square footage while decreasing the office square footage. The current plan will generate approximately **37 additional AM peak hour trips** and approximately **40 less PM peak hour trips** than the application approved in 2002/2003.

Regional and Background Traffic Growth

To continue accounting for regional growth, a one percent (1.0%) inherent growth rate, compounded annually over a ten-year period beyond the first horizon year of 2010 (for a total of a 14.95% growth in existing (2006) traffic), was considered in the future conditions with full build-out development. In addition to the regional growth, traffic generated by the planned local background developments listed in Table 2 under the full build-out year (2020) was considered in this scenario. The trip distribution and assignment for each planned background development are included in the Technical Appendix.

Stage I PUD (build years between 2010 and 2020) Site Generated Volumes

In order to calculate the trip generation for the proposed development, the ITE's Trip Generation, 7th Edition publication was used to determine the trips into and out of the proposed site for the weekday morning and afternoon peak hours. It was assumed that the additional 48,850 square feet of ground floor retail proposed for the site will be supported by pedestrians and the public transportation in the area, and was assumed to not generate any vehicular trips to the site. To account for the Waterfront-SEU Metro Station located at the development site, the WMATA 2005 Development-Related Ridership Survey was used to determine an appropriate trip reduction for the site. Table 6 presents the total new trips generated by the proposed Stage I PUD of the Waterfront development, and Table 7 shows the total future trips generated by the Waterfront development when complete.

**Table 6: Stage I PUD (build years between 2010 and 2020) Site Trip Generation**

Land Use	ITE Code	Size	Units	----- Week day -----						
				AM Peak Hour			PM Peak Hour			Daily
				In	Out	Total	In	Out	Total	Total
Condominium #1 (NW)	220	320	DU	33	128	161	127	67	194	2,074
Condominium #2 (NE)	220	360	DU	37	144	181	141	75	216	2,314
Office Building #2 (West M St)	710	302	kSF	400	54	454	71	346	417	3,121
Office Building #4 (East M St)	710	327	kSF	426	58	484	76	369	445	3,319
Stage I PUD Total Trips without Reduction:				896	384	1,280	415	857	1,272	10,828
Reduction for Alternative Modes: 80%				-717	-307	-1,024	-332	-686	-1,018	-8,662
STAGE I PUD TOTAL SITE TRIPS				179	77	256	83	171	254	2,166

Table 7: Total Waterfront Development Site Trip Generation (2020)

Land Use	ITE Code	Size	Units	----- Week day -----						
				AM Peak Hour			PM Peak Hour			Daily
				In	Out	Total	In	Out	Total	Total
Stage II PUD Total Trips (2010)				181	64	245	112	197	309	1,746
Stage I PUD Total Trips (2020)				179	77	256	83	171	254	2,166
Total Waterfront Development Trips				360	141	501	195	369	564	3,911

Future Conditions with Full Build-out Development Traffic Volumes

The distribution of site trips was based on existing volumes and anticipated regional traffic patterns. In addition, an assessment of future roadway conditions was used to determine the routes that will provide the most convenient access to the development. The inbound and outbound trips calculated for the morning and afternoon peak hours were routed in the roadway network to the site based on the location of the proposed site and the existing traffic data.

The site traffic assignment for the weekday morning and afternoon peak hours is illustrated in Figure 11. The additional inherent growth, planned local background developments, and proposed Stage I PUD (2010 to 2020 development years) development site trips were added to the future with interim year development volumes in order to establish the future with full build-out development 2020 traffic volumes as shown in Figure 12.

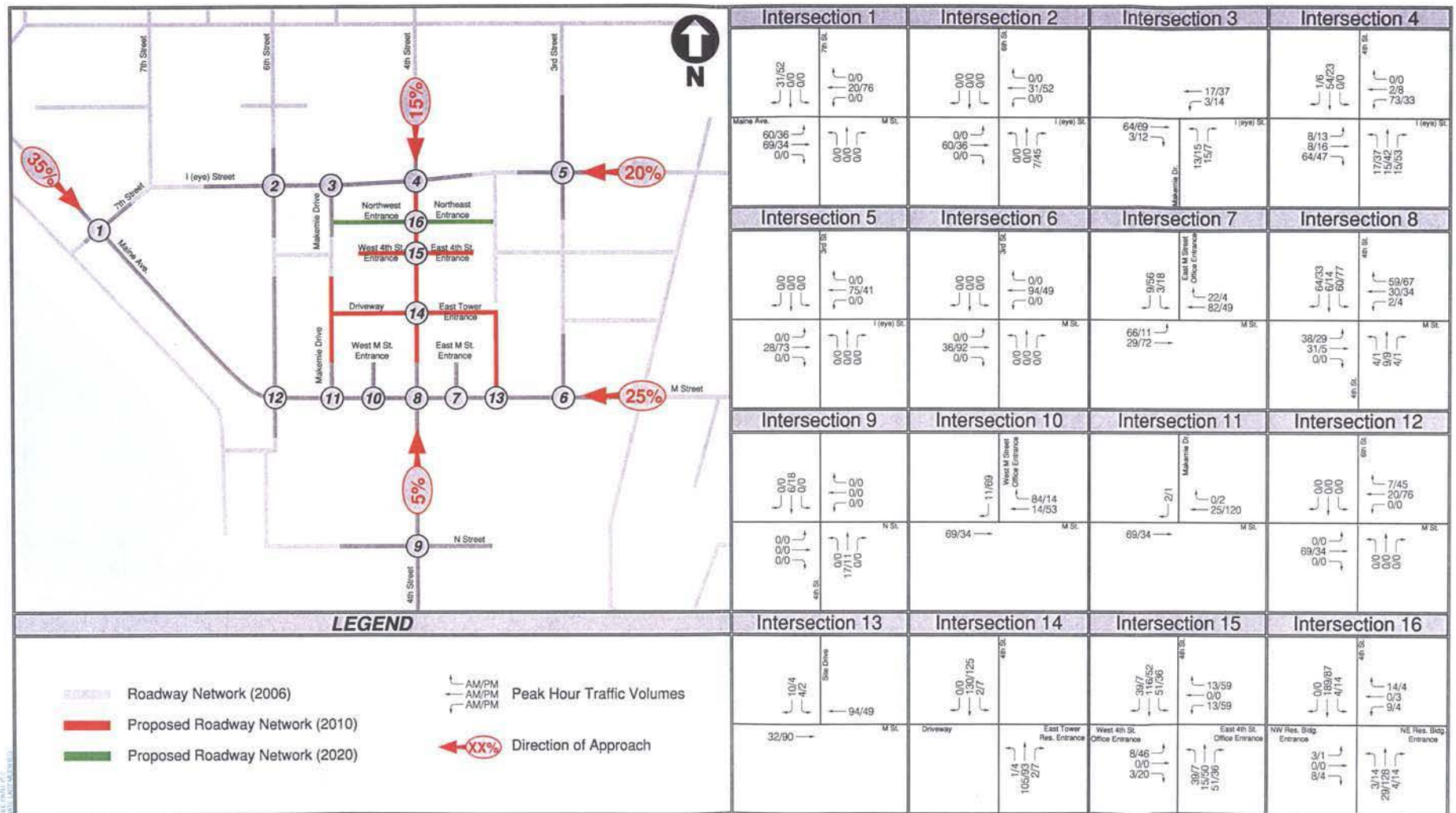


Figure 11 Stage I PUD Site Generated (2020) Volumes and Direction of Approach

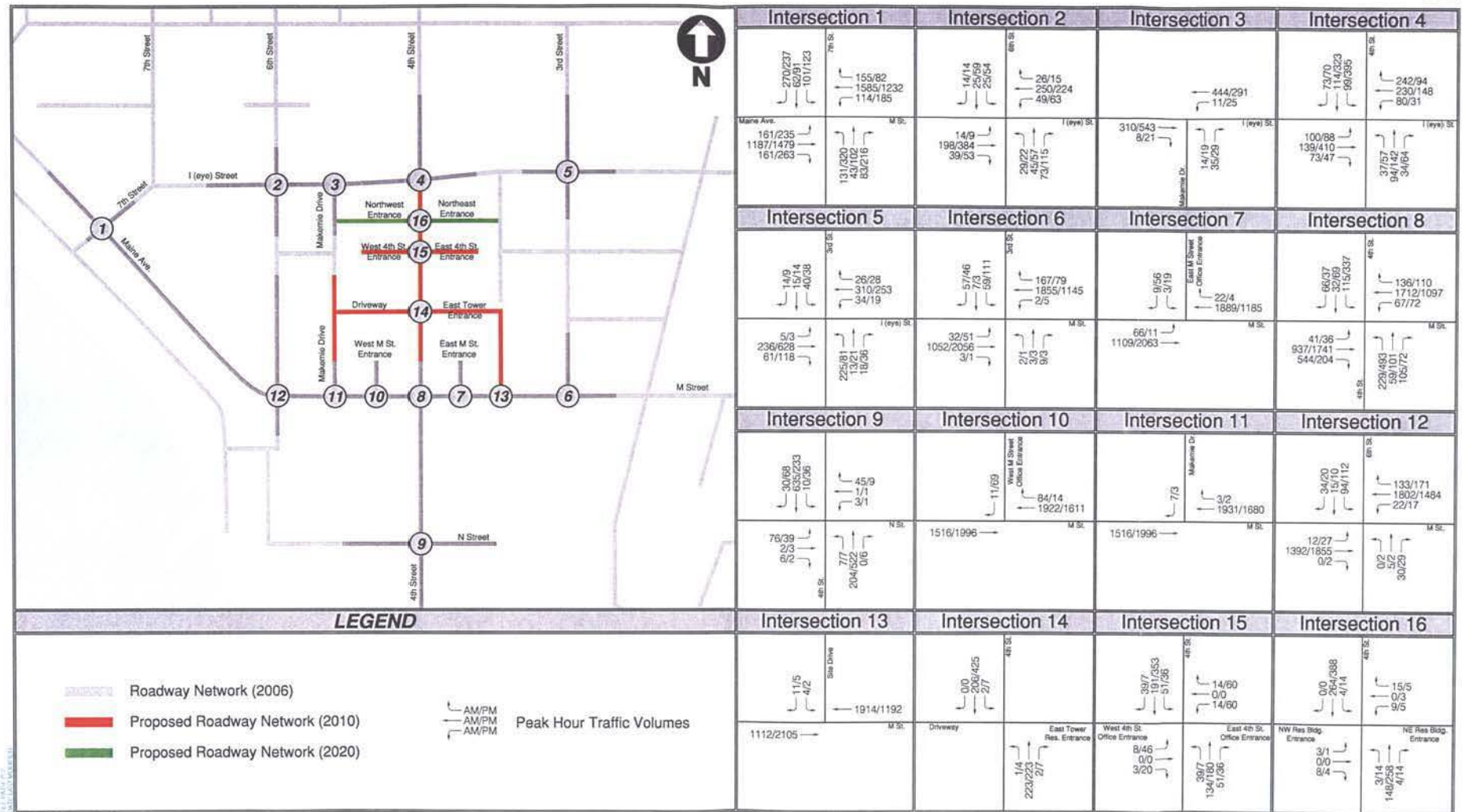


Figure 12 Future Conditions with Full Build-out Development (2020) Volumes



Future Conditions with Full Build-out Development Capacity Analysis and Results

Capacity analyses were performed at the intersections contained within the study area during the morning and afternoon peak hours under the future conditions with full build-out development. The results of the intersection capacity analyses are presented in Table 8, and are expressed in terms of level of service (LOS) and delay (in seconds per vehicle). The detailed analysis worksheets are contained in the Technical Appendix.

Table 8: Future Conditions with Full Build-out Development (2020) Capacity Analysis

Intersection (Approach/Movement)	Future Conditions with Full Build-Out Development (2020)			
	AM Peak Hour		PM Peak Hour	
	LOS	Delay	LOS	Delay
Maine Avenue and 7th Street (Signalized)				
Overall	C	20.1	D	38.4
Eastbound Approach	C	31.9	C	34.3
Westbound Approach	C	26.6	C	24.2
Northbound Approach	B	17.9	C	32.7
Southbound Approach	B	19.0	D	47.3
I Street and 6th Street (Signalized)				
Overall	B	15.6	C	20.4
Eastbound Approach	A	7.0	B	16.0
Westbound Approach	A	7.2	A	8.2
Northbound Approach	D	40.3	D	40.9
Southbound Approach	D	35.1	C	33.1
I Street and Makemie Drive				
Overall	N/A	N/A	N/A	N/A
Westbound Left Turn Movement	A	0.3	A	1.0
Northbound Approach	B	12.6	C	16.9
I Street and 4th Street (Signalized)				
Overall	B	13.4	C	34.9
Eastbound Approach	A	7.6	C	24.1
Westbound Approach	A	3.2	A	7.2
Northbound Approach	C	29.4	D	39.5
Southbound Approach	C	30.2	D	50.4
I Street and 3rd Street (Signalized)				
Overall	C	22.2	C	23.7
Eastbound Approach	C	22.6	C	27.7
Westbound Approach	B	16.5	B	15.3
Northbound Approach	C	31.2	C	23.1
Southbound Approach	B	18.1	B	17.9
M Street and 3rd Street (Signalized)				
Overall	C	20.6	A	8.7
Eastbound Approach	B	19.7	A	4.3
Westbound Approach	C	21.2	B	14.3
Northbound Approach	C	26.8	C	26.8
Southbound Approach	B	16.5	C	23.1



Intersection (Approach/Movement)	Future Conditions with Full Build-Out Development (2020)			
	AM Peak Hour		PM Peak Hour	
	LOS	Delay	LOS	Delay
M Street and Site Drive #1				
Overall	N/A	N/A	N/A	N/A
Southbound Approach	C	21.3	B	11.8
M Street and East M Street Office Entrance				
Overall	N/A	N/A	N/A	N/A
Southbound Approach	C	23.0	B	12.3
Eastbound Left Turn Movement	B	11.0	A	0.6
M Street and 4th Street (Signalized)				
Overall	C	30.8	F	84.0
Eastbound Approach	C	22.8	F	112.5
Westbound Approach	C	34.0	D	36.1
Northbound Approach	D	42.1	E	73.0
Southbound Approach	D	38.2	F	111.7
Overall Mitigations - Adjust AM and PM signal timings	C	23.9	D	52.8
Eastbound Approach - Restripe right turn lane into thru/right shared lane	A	4.4	D	54.3
Westbound Approach	C	34.1	D	45.8
Northbound Approach	D	42.1	E	61.6
Southbound Approach	D	38.2	D	52.8
4th Street and N Street (Signalized)				
Overall	A	6.5	A	4.8
Eastbound Approach	D	41.3	D	37.2
Westbound Approach	D	35.0	C	34.6
Northbound Approach	A	2.9	A	3.4
Southbound Approach	A	1.2	A	1.8
M Street and West M Street Office Entrance (RIRO)				
Overall	N/A	N/A	N/A	N/A
Southbound Approach	B	10.1	A	9.8
M Street and Makemie Drive				
Overall	N/A	N/A	N/A	N/A
Southbound Approach	B	10.0	A	9.7
M Street and 6th Street (Signalized)				
Overall	A	7.8	A	9.5
Eastbound Approach	B	10.4	A	9.4
Westbound Approach	A	4.0	A	6.7
Northbound Approach	C	25.6	C	25.9
Southbound Approach	C	31.4	D	38.9
4th Street and Site Drive #1				
Overall	N/A	N/A	N/A	N/A
Northbound Left Turn Movement	A	7.7	A	8.5
Southbound Left Turn Movement	A	7.7	A	7.8
4th Street and West Tower Entrance/East 4th St. Office Entrance				
Overall	N/A	N/A	N/A	N/A
Eastbound Approach	B	13.1	C	19.1
Westbound Approach	B	11.9	C	16.7
Northbound Left Turn Movement	A	7.8	A	8.4
Southbound Left Turn Movement	A	7.7	A	7.8



Intersection (Approach/Movement)	Future Conditions with Full Build-Out Development (2020)			
	AM Peak Hour		PM Peak Hour	
	LOS	Delay	LOS	Delay
4th Street and Site Drive #2				
Overall	N/A	N/A	N/A	N/A
Eastbound Approach	B	10.6	B	12.5
Westbound Approach	B	10.5	C	15.3
Northbound Left Turn Movement	A	7.9	A	8.5
Southbound Left Turn Movement	A	7.6	A	7.9

Note: N/A means not available.

As mentioned previously, Level of Service (LOS) D is typically used as the acceptable LOS threshold in the District; although LOS E and F are sometimes accepted in certain highly urbanized areas. The results presented in Table 8 show that all study intersections will operate at acceptable levels of service under the future conditions with full build-out development, except at the intersection of M Street with 4th Street. This intersection will operate at acceptable levels after restriping the eastbound right turn lane into a through/right shared lane and adjusting the AM and PM signal timings. Figure 13 illustrates graphically the intersection capacity analysis results under the future conditions with full build-out development. Figure 14 shows the future site access for the full build-out of the site.

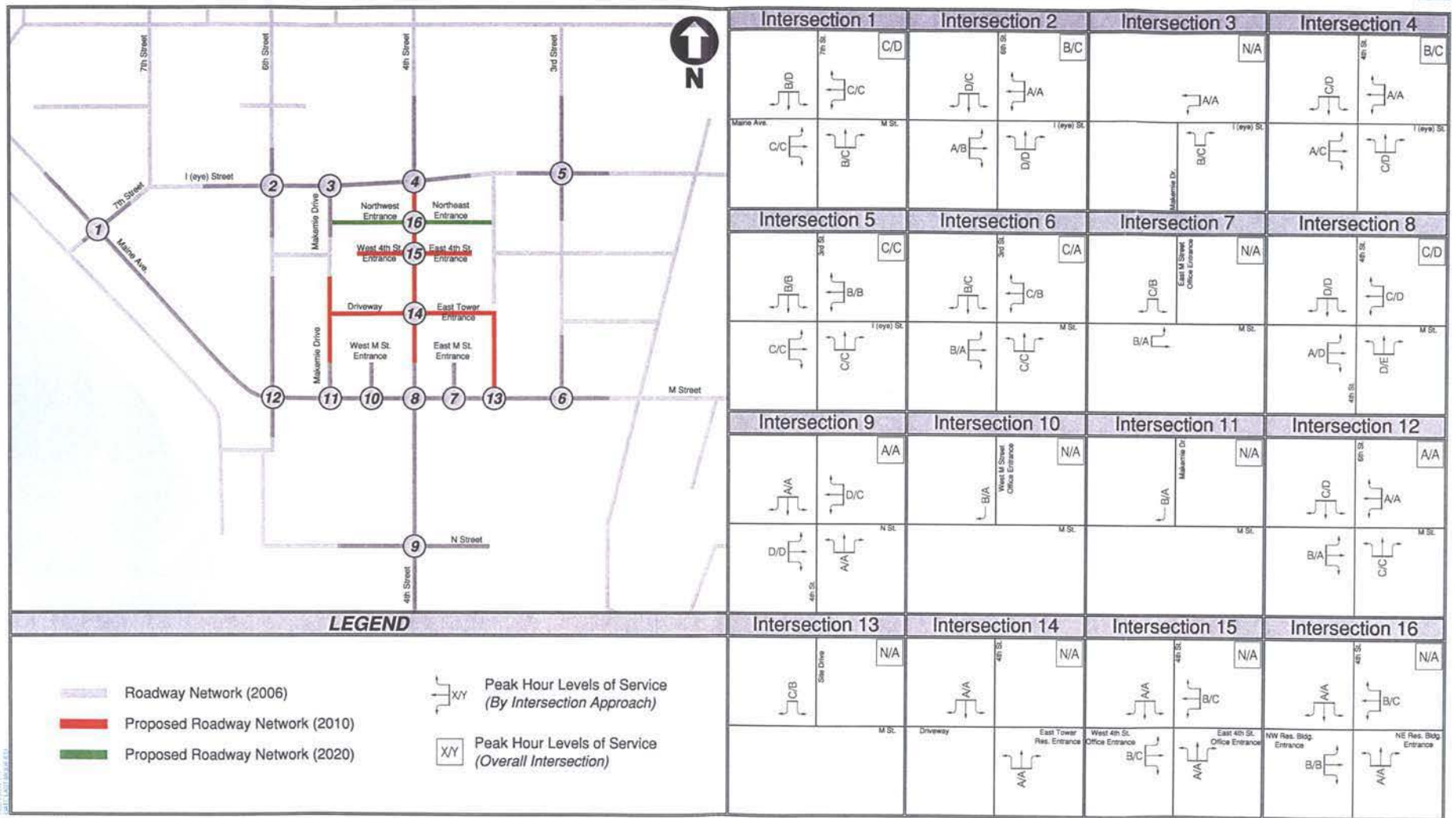


Figure 13
Future Conditions with Full Build-out Development (2020) Levels of Service

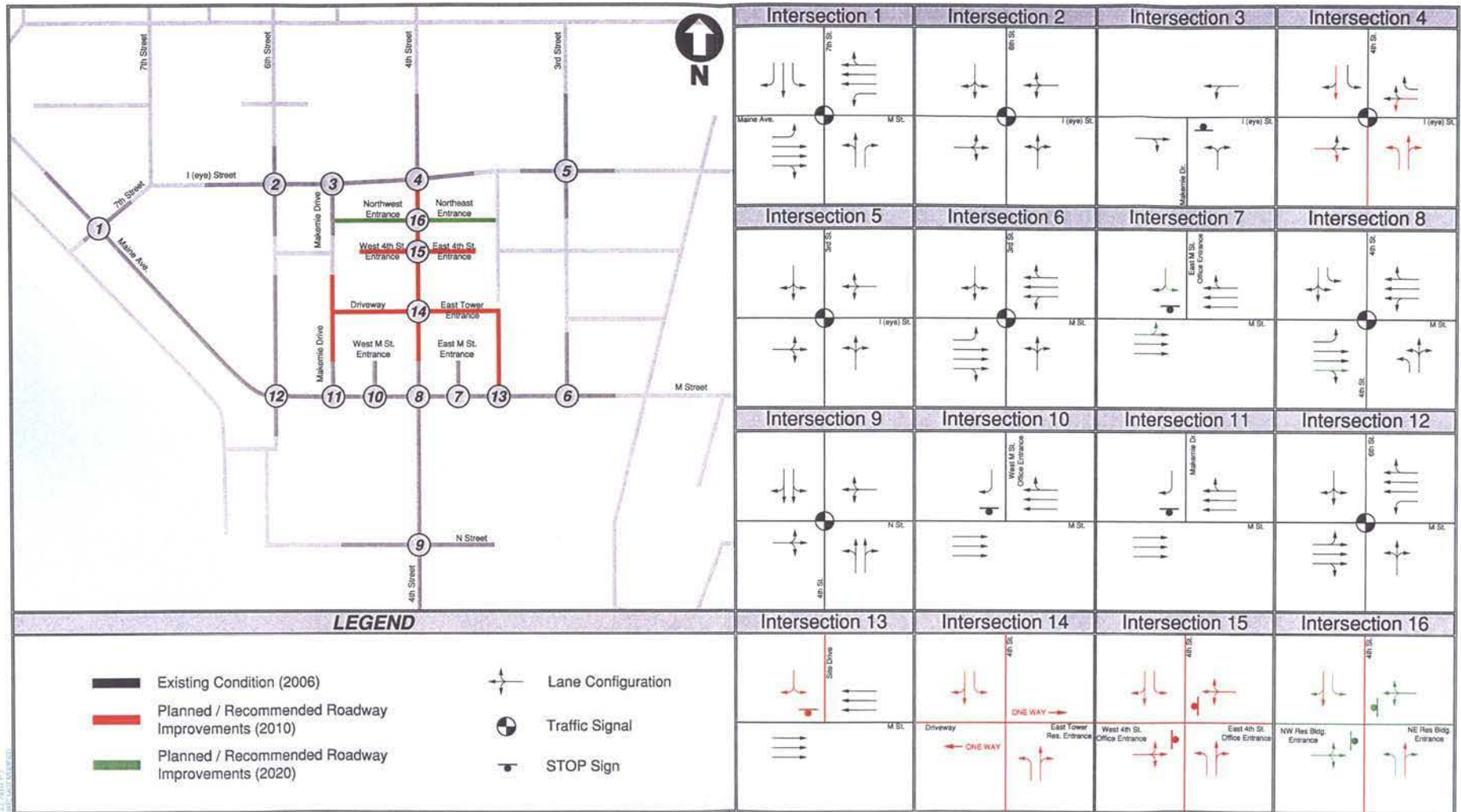


Figure 14
Future Conditions with Full Build-out Development (2020) Recommended Improvements



EXISTING AND FUTURE PARKING CONDITIONS

Parking Demand

The site is located adjacent to the Green Line Metro rail, with the Waterfront Station entrance located within the project site boundary. The site is also bounded by several bus lines that run along Third, Sixth, M, and Eye Streets. As mentioned previously, given the site's proximity to the Metro and bus lines, a high use of public transit is anticipated. Neighborhood serving retail located within the development is considered non-destination, and will attract people that live within walking distance to the site. The residential density of the development and the surrounding area also encourages walking and bicycling to and from the site. By limiting the number of parking spaces, alternate modes of transportation are indirectly encouraged.

Parking Supply

In the Stage 1 PUD Modification, the existing below grade parking structure will be demolished, and new structured below grade parking is proposed. The new parking structures will be accessed from 4th Street south of Eye Street and north of M Street, M Street east and west of 4th Street, and from Private Drives that are internal to the site.

The applicant has requested approval for the minimum number of required parking spaces for both commercial and residential uses on the site per zoning ordinance DCMR 11. The flexibility to increase the number of parking spaces provided to respond to market conditions is requested, along with the flexibility to allocate commercial parking spaces between Retail and Office use should the distribution of gross floor area between the retail and office uses as submitted in the PUD application change.

Residential parking is based on the assumption that one dwelling unit is provided for each 1,000 square feet of residential gross floor area as the final dwelling unit count may vary. Parking analysis was performed utilizing Auto Dependent Ratios (ULI Shared Parking-2nd Edition), Adjustment for Auto Utilization, and Mixed Use Synergy / Capture in order to confirm that the parking demand is adequately accommodated for the proposed uses in the development.

The following numbers reflect the projected parking demand for each phase of development, as well as the number of spaces currently accommodated on the site:

Table 9: Parking Summary

Development Phase	Commercial Spaces	Residential Spaces	Total Spaces
Existing Conditions (2006)	1,252	.	1,252
Future Conditions with Interim Year Development (2010)	410	95	505
Future Conditions with Full Build-out Development (2020)	777	310	1,087



TRUCK ACCESS ASSESSMENT

Loading Dock Access in Interim Conditions (2010)

Makemie Place Loading Dock: The first access is off Makemie Place/Private Drive on the west side of the site to serve the West 4th Street Building and the West Tower. Access to the Makemie loading docks will be via the Makemie Place/Eye Street intersection. Vendors/residents accessing the site from the west will travel along Maine Avenue to the 7th Street intersection where they will turn left onto 7th Street/Eye Street, travel east along Eye Street to Makemie Place, and turn right onto Makemie Place to access the loading docks. Vendors/residents accessing the site from the east will travel westbound along M Street to 4th Street, turn right on 4th Street, travel north and turn left onto Eye Street, and turn left again onto Makemie Place. Drivers will be encouraged to access the site via these two routes in order to minimize truck traffic along the residential neighborhood roadways.

The Makemie Place loading dock will consist of five loading berths, two of which can accommodate a 55-foot truck. The other three spaces can accommodate a 30-foot single unit truck and/or a trash truck. A figure showing the Makemie Place maneuvering for the 55-foot truck is shown in Figure 15.

Wesley Place Loading Dock: The second loading dock in the interim conditions is off Wesley Place/Private Drive on the east side of the site to serve the East 4th Street Building, the East Tower, and the grocery store. Access to the Wesley Place loading docks will be via the Wesley Place/Eye Street intersection. Vendors/residents accessing the site from the west will travel along Maine Avenue to the 7th Street intersection where they will turn left onto 7th Street/Eye Street, travel east along Eye Street to Wesley Place, and turn right onto Wesley Place to access the loading docks. Vendors/residents accessing the site from the east will travel westbound along M Street to 4th Street, turn right on 4th Street, travel north and turn right onto Eye Street, and turn right again onto Wesley Place. Drivers will be encouraged to access the site via these two routes in order to minimize truck traffic along the residential neighborhood roadways.

The Wesley Place loading dock will consist of seven loading berths, of which at least two spaces can accommodate a 55-foot truck. The other spaces can accommodate a 30-foot single unit truck and/or a trash truck. A figure showing the Wesley Place maneuvering for the 55-foot truck is shown in Figure 16.

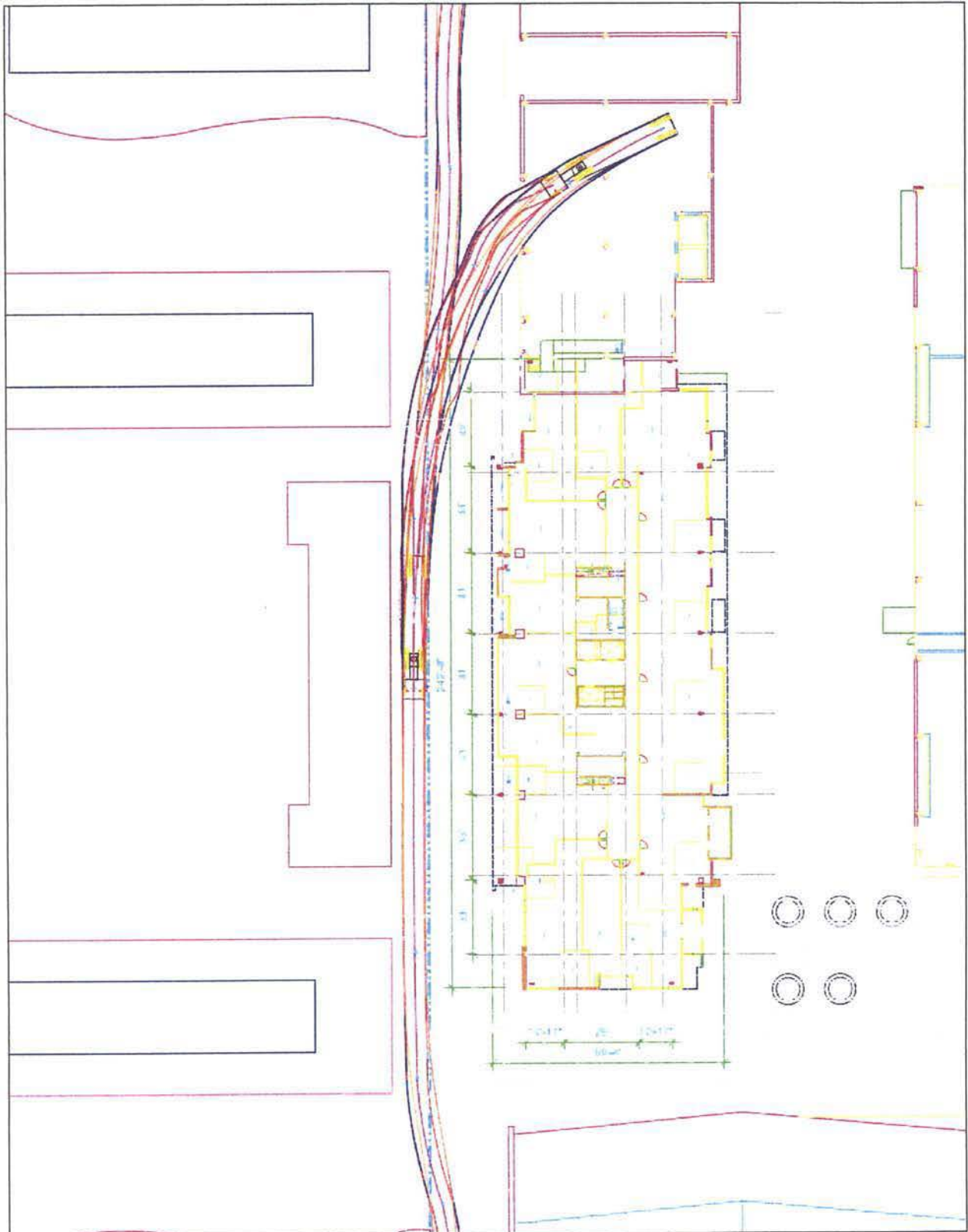


Figure 15: Makemie Place Loading Dock Truck Maneuvering (2010)



Figure 16: Wesley Place Loading Dock Truck Maneuvering (2010)



Loading Dock Access in Build-out Conditions (2020)

In the build-out conditions in 2020, three more loading docks will be added to the site. The first is a loading dock for the West M Street Building, which is off Makemie Place, and will be access the same as the other Makemie Place loading dock previously described. The dock will accommodate three spaces: one for a 55-foot truck, a single-unit truck, and a trash truck. The second is a loading dock for the Northeast Building, near the loading dock previously described along Wesley Street. This dock will provide two loading spaces for the residential building. The last loading dock will be for the East M Street building, located on the southeast corner of the site. A truck maneuvering into this dock will back into the alley from M Street, and back into the loading dock.



CONCLUSIONS

This report contained the findings of a revised traffic impact analysis conducted for the proposed Waterfront development, currently known as the Waterside Mall, a mixed-use development located in Southwest Washington, DC. This traffic impact analysis replaces the traffic impact study prepared on October 31, 2006. The proposed redevelopment plan consists of approximately 1,040 dwelling units, 1.172 million square feet of office, 55,000 square foot grocery store, and 69,055 square feet of ground floor retail.

The current application is a revision to the Stage 1 PUD application approved in 2002/2003. The application approved back in 2002/2003 envisioned approximately 400 dwelling units, 45,000 square feet of ground floor retail, 2.0 million square feet of office, and a 30,000 square foot grocery store. The current application envisions increasing the residential units and retail while decreasing the office square footage. The current plan will generate approximately 37 additional AM peak hour trips and approximately 40 less PM peak hour trips than the application approved in 2002/2003.

The project site is bounded by M Street to the south, 6th Street/Makemie Place to the west, Eye Street to the north, and 3rd Street/Wesley Place to the east. Currently, direct access to the site is provided from M Street and 6th Street/Wesley Street. This access will be maintained throughout the redevelopment along with access proposed along the planned extension of 4th Street from M Street in the south to Eye Street in the north. The project site was analyzed over two horizon years with the first interim development year assumed to be complete in the year 2010 and the final build-out to occur in 2020.

The analysis presented in this report supports the following major conclusions:

- *Existing Conditions (2006)*

The existing Waterside Mall site is served by an extensive network of public transportation, including the Waterfront-SEU Metrorail station located at the site, five different bus lines (with eleven different bus routes), and the DC Circulator. The availability of public transportation contributes to the reason that all intersections contained within the study area operate at acceptable Levels of Service (LOS) under existing conditions during the morning and afternoon peak hours.

- *Future Conditions without Development (2010)*

The results of the future without the proposed development (2010) capacity analyses show that, with the addition of regional inherent growth and nearby planned background developments, all study area intersections are projected to operate at acceptable LOS, except the intersections of 7th Street with Maine Avenue and I Street with 4th Street. With adjustments to the signal timings during the afternoon peak hour, these intersections will operate at acceptable levels.



- *Future Conditions with Interim Year Development (2010)*

Currently, 4th Street SW is disconnected between Eye Street and M Street SW. With the redevelopment of the proposed Waterfront Development, 4th Street will be reconnected completing the grid street network that is essential in urban areas. The future cross-section is designed with traffic calming measures, bicycle accommodations, and pedestrian considerations as recommended by DDOT.

The Stage II PUD (build year 2010) of the proposed Waterfront Development will consist of approximately 360 residential dwelling units, 544,695 square feet of office, a 55,000 square foot grocery store, and 20,205 square feet of ground floor retail. The interim development will generate approximately 245 morning peak hour trips, 310 afternoon peak hour trips, and 1,745 average daily vehicle trips. The future analysis with interim year development showed that the study intersections would continue to operate at acceptable levels, except the intersection of 4th Street and M Street. With adjustments to the signal timings during the afternoon peak hour, this intersection will operate at acceptable levels.

- *Future Conditions with Full Build-out Development (2020)*

The remainder of the Waterfront Development will consist of approximately 680 residential dwelling units, 628,145 square feet of office, and 48,850 square feet of ground floor retail. This development under the build years of 2010 to 2020 will generate approximately 255 morning peak hour trips, 255 afternoon peak hour trips, and 2,165 average daily vehicle trips. The total development at full build-out will consist of approximately 1,040 dwelling units (condominium or apartment), 69,055 square feet of ground floor retail, 1.172 million square feet of office, and 55,000 square foot grocery store. The future analysis with full build-out development showed that the study intersections would continue to operate at acceptable levels, except at the intersection of 4th Street and M Street SW. This intersection will operate at acceptable levels after restriping the eastbound right turn lane into a through/right shared lane and adjusting the AM and PM signal timings.

Based on these results, the proposed Waterfront Development will help better traffic conditions in the study area by completing the grid network with the construction of 4th Street SW between Eye Street and M Street. The addition of Waterfront Development traffic has minimal impact and the surrounding network can accommodate these additional vehicle-trips.

E

Updated List of Witnesses

Deborah Ratner-Salzberg

Forest City Washington

Representative of the Applicant

Mitchell N. Schear

Vornado/Charles E. Smith

Representative of the Applicant

Shalom Baranes

Shalom Baranes Associates

Expert in Architecture and Design

Iris Amdur

GreenShape LLC

Expert in Sustainable Design Features and LEED Certification

Chad Baird

Gorove/Slade Associates, Inc.

Experts in Traffic Engineering and Design

Tom Martens

Economics Research Associates

Expert in Economic Analysis

Steven E. Sher

Holland & Knight

Expert in Urban Planning

**ESTIMATED TIME REQUIRED FOR
PRESENTATION OF APPLICANT'S CASE:**

1 Hour

F

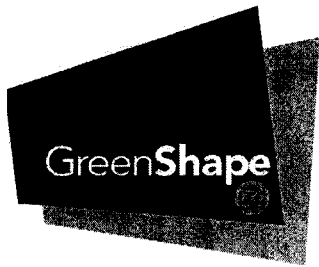
**Iris Amdur
GreenShape LLC**

OUTLINE OF TESTIMONY

- I. Introduction
- II. Sustainable Design Features
- III. Elements of LEED Certification
- IV. Conclusions

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6



Iris Amdur

March 2007

Ms. Amdur, Principal of GreenShape LLC, has worked with building owners, developers, design and construction teams in the advancement of sustainability for over 16 years. She guides the development of cost-effective strategies for improving building performance. Ms. Amdur helps her clients create a legacy of environmental excellence through their work while happily saving 35% or more on their electricity and water bills.

Iris Amdur's extensive professional expertise in applying the US Green Building Council's Leadership in Energy and Environmental Design (LEED) building rating system has been featured in numerous publications and presentations. She is a repeat guest on the Kojo Nnamdi Show on 88.5 WAMU radio and a frequent presenter at the USGBC GreenBuild Conference and the National Association of Independent Schools Annual Conference.

Ms. Amdur serves as Vice Chair of the USGBC Formal Education Committee. Her firm has been contracted to help the USGBC roll out the new LEED for Schools green building rating system and to write the corresponding reference guide and training materials. Ms Amdur is completing work on a LEED Platinum school for the Sidwell Friends School. She holds a Bachelor of Fine Arts and a Bachelor of Architecture from the Rhode Island School of Design where is a visiting lecturer

Iris Amdur is active in the Washington, DC metropolitan green building community. She was a member of Council Member Graham's Green Building Task Force and served as a subject matter expert for drafting of the DC Green Building Act of 2006. Ms. Amdur founded and coordinates the National Capitol Region Construction Materials Recovery Coalition, winning a GSA National Environmental Stewardship Award in April 2006. Ms. Amdur's services also helped the US Consulate Compound in Mumbai, India to garner a sustainability award from the Bureau of Overseas Building Operations.

Education

- Bachelor of Architecture, Rhode Island School of Design, 1990
- Bachelor of Fine Arts, Rhode Island School of Design, 1988
- Real Estate coursework, Northern Virginia Community College, 1991-1993
- Train the Trainer coursework, University of Richmond, 1996

Professional Experience

- GreenShape LLC, Principal, since April 2004
- Natural Logic, Inc., Sustainable Design Specialist, 2 years
- Community Forklift, President, 3 years
- Iris Amdur Consulting, 4 years
- Goetz Group, Project Manager, .5 years
- United States Postal Service, Consultant, 2.5 years
- Weichert Realtors, Salesperson 1.5 years
- Smith Group, Project Architect 1.5 years
- Notter, Finegold + Alexander, Project Architect, 1.5 years

Publications

- “Going Green,” Rhode Island School of Design Views Summer 2003
- “Managing Waste,” Green@Work Magazine, March/April 2003
- “Protecting Groundwater from Pesticides; A Community Action Guide,” Friends of the Earth, March 2000. Edited and distributed publication.
- “Building Deconstruction and Material Reuse in Washington, DC,” United States Environmental Protection Agency, 1999. Served as community resource.

Presentations and Workshops

- Kojo Nnamdi Show, 88.5FM WAMU radio, “Green Building”, November 2006.
- USGBC Greenbuild Conference “Let Your Campus Speak: Sustainable Design as a Catalyst for Transformation”, November 2006.
- “Controlling LEED Costs,” Design DC, Washington DC, July 2006.
- “Sustainable School Case Study: The Sidwell Friends School,” DC Earth Week, April 2006
- “Organizing for Sustainability: Mobilizing on the GMU Campus” George Mason University, April 2006.
- “Sustainable Design for Affordable Modular Housing” Rhode Island School of Design, Providence, RI, March 2006.
- “Practical Tools for Building a Sustainability Agenda” National Association of Independent Schools, Boston, MA, March 2006.
- “Building Green Process and Regional Trends” Construction and Real Estate Women, Silver Spring, MD, November 2005.
- “Practical Tools for Building a Sustainability Agenda” National Association of Independent Schools, San Diego, CA, February 2005.
- Kojo Nnamdi Show, 88.5FM WAMU radio, “Green Building”, November 2004
- “Designing for Sustainable Living” Chesapeake Bioneers Conference, Washington, DC. Oct. 2004.
- “Establishing Infrastructure for Construction Material Recovery in DC” DC Environmental Task Force Greening the Government Steering Committee Meeting, Oct. 2004.
- “LEED and Living Green,” USGBC NCR Chapter Spring Symposium, Arlington, VA, May 2004
- National Association of Realtors Land Use Forum, Washington, DC, May 2004.
- Sustainable Design Program – Construction Waste Management, Construction Specifications Institute (CSI), DC Metropolitan Chapter, March 2004.
- “Establishing Infrastructure for Successful Construction Waste Management”, USGBC

- Greenbuild Conference, Pittsburgh, PA November 2003.
- “The Cost of Building Green”, Greening of Industry Conference, San Francisco, CA, October 2003
- Council of Governments (COG) Recycling Committee Meeting, May 2003
- DC Brownfields Redevelopment Action Team Meeting, Earth Conservation Corps, Washington, DC, March 1999.
- DC City Cable Community Focus, June 1999.

Community and Advocacy

- Washington DC Green Building Task Force Subject Matter Expert for drafting of DC Green Building Act of 2006
- US Green Building Council National and NCR Chapter, Member 2003 to present
 - USGBC National Formal Education Committee Member, elected 2006
- Construction Material Recovery Coalition – National Capital Region, Founder and Coordinator 2002 to present. Winners of GSA Environmental Stewardship Award, April 2006.
- Maryland Green Building Network, Member 1998 to present
- NVAR Housing Needs Committee, Member 1994 to 95

Training and Program Development (4 projects)

- **LEED for Schools Rating System**, Washington, DC 2006
Coordinating public comments for LEED for Schools Rating System, drafting final version of LEED for Schools Reference Guide and developing supporting workshop materials.
Client: United States Green Building Council (USGBC)
- **DC Public Schools “Partnering for Success” Workshop**, Washington DC 2006
Assisted in facilitation of workshop designed to prepare design professionals, construction management teams and DCPS staff for the teamwork required for successful implementation of the DCPS School Modernization Initiative.
Client: Community Building Institute
- **Nonprofit Housing Green Building Charrette Training**, Washington, DC 2006
Charrette facilitation training session using actual project as model for educating non-profit housing developers Client: Center for Nonprofit Housing and Economic Development
- **General Contractors’ LEED Introduction**, Gaithersburg, MD 2006
Developed customized presentation to introduce internal construction team stakeholders to the LEED-related activity affecting their professional work.
Client: Grunley Construction Company

Projects: Educational Sector (9 projects)

- **AOL Childcare Center**, Dulles, Virginia 2007
Sustainability consulting for new childcare center on corporate campus. Sustainability Goal: LEED-NCv2.2 or LEED for Schools. Client: AOL LLC and Knowledge Learning Corporation.

- **Johns Hopkins University, Washington DC 2006-2008**
Sustainability consulting for renovation of urban building housing classrooms and offices using LEED for Existing Buildings Rating System. Sustainability Goal: LEED EB Certification. Client: Johns Hopkins University.
- **Potomac School, Lower School, McLean, Virginia 2006**
LEED Feasibility Evaluation for new lower school and administrative facilities. Client: Cox Graee + Spack, Architects
- **Fiterman Hall, CUNY Manhattan Community College, New York, NY 2006-2008**
Application of Executive Order 111 and LEED to design and construction of new academic facility being rebuilt after World Trade Center collapse. Client: Pei Cobb Freed & Partners Architects LLP
- **Washington International School, Washington, DC 2005-2006**
LEED Feasibility Evaluation for new theater and classroom facility. Client: Cox Graee + Spack, Architects
- **Princeton University, Princeton, NJ, 2004**
Guiding Princeton University to defining campus-wide Sustainability Guidelines. Client: Kieran Timberlake Associates
- **Sidwell Friends School, Washington, DC 2004-2008**
Middle School major renovation and addition, Lower School addition and new gymnasium, campus-wide Sustainability Master Plan including site improvements, integrated storm water management and constructed wetland. Providing guidance and support for development of a sustainability master plan addressing operations, maintenance, purchasing and food service programs. Assisting with fundraising, community interaction and curriculum development. Sustainability Goal: Lower School targeting LEED Silver rating. Middle School targeting LEED Platinum rating
- **Savoy School, Washington, DC 2006-2008**
Guiding first project within the District of Columbia Public School system to target LEED Certification. Savoy is undergoing improvements in a district-wide major renovation project, setting a precedent for other schools to increase performance and sustainability as they modernize. Client: Bowie Gridley Architects. Sustainability Goal: LEED Certified.

Projects: Cultural, Hospitality and Retail (12 projects)

- **Shelby Mixed-Use, Nashville, TN , 2007**
Sustainability consulting for development of a 500,000 sf, mixed-use project that includes retail, hotel and office tower as part of the Nashville Sounds Baseball Riverfront Redevelopment Project. Sustainability Goal: LEED-CS. Client: Hastings Architecture & Associates.

- **Demonbreun Hotel**, Nashville, TN , 2007
Sustainability consulting for a 90,000 sf, five story hotel as part of the Nashville Sounds Baseball Riverfront Redevelopment Project. Sustainability Goal: LEED-NCv2.2. Client: Hastings Architecture & Associates.
- **Gaithersburg Aquatic Center**, Gaithersburg, MD, 2006-2009
Sustainability consulting for development of new aquatics and recreation building for City of Gaithersburg. Sustainability Goal: LEED Silver. Client: Sorg and Associates.
- **Columbia Heights Community Center**, Washington, DC, 2006
Sustainability consulting for development of new building for DC Department of Parks and Recreation. Sustainability Goal: LEED Silver. Client: The Temple Group
- **Trinidad Recreation Center**, Washington, DC 2006
Sustainability consulting for development of new building for DC Department of Parks and Recreation. Sustainability Goal: LEED Certified. Client: The Temple Group
- **Starbucks Coffee Company**, Washington, DC, 2006
Sustainable design consulting for restaurant interior utilizing LEED criteria to achieve high performance in a LEED silver building. Client: Starbucks Coffee Company
- **The Elephant Sanctuary Visitors' Center**, Hohenwald, Tennessee, 2006
Sustainable design consulting and grant-writing guidance for visitor's center at habitat refuge for old, sick or needy elephants who have been retired from zoos and circuses. Project is pursuing an "off-the-grid" approach beyond LEED Platinum.
- **New Arlington Hotel**, Arlington, Virginia, 2005
Sustainable Design and Construction Consulting Services for proposed new 100+ unit hotel project. Client: Schupp Development
- **Tinner Hill Museum and Cultural Center**, Arlington/Falls Church, Virginia, 2004-2005.
Sustainable Building Facilitation for "house" museum and performance space honoring African American Heritage seeking to recreate interdependence with land and community and utilizing in low-impact development techniques. Client: Bowie Gridley Architects.
- **Laurel Hill Golf Clubhouse**, Lorton, VA, 2003-2004
10,000 s.f. club house. Facilitated LEED assessment charrette and provided technical support for Fairfax County Park Authority project investigating feasibility of seeking LEED Certification. Client: KSI
- **Village Crest Retail/Office**, Howard County, MD, 2003
21,000 sf retail and commercial office PVC-free building.
Sustainability Goal: Targeting LEED Silver rating.
Client: Village Crest Development Corporation

Projects: Commercial Office (15 projects)

- **American Pharmacists Association Headquarters**, Washington, DC, 2007-2009
Providing LEED feasibility and sustainability consulting services for a 360,000 sf commercial office building that includes the preservation of historic building. Sustainability Goal: LEED-CS. Client: Hartman Cox Architects
- **Twinbrook**, Rockville, MD, 2007-2009
Providing LEED feasibility and sustainability consulting services for a 150,000 sf commercial office building. Sustainability Goal: LEED-CS. Client: DBI Architects
- **Parklawn Place**, Washington, DC , 2007-2009
Providing LEED feasibility and sustainability consulting services for a 100,000 sf commercial office building rehabilitation project. Sustainability Goal: LEED-CS. Client: The JBG Companies
- **Shelby Mixed-Use**, Nashville, TN , 2007
Sustainability consulting for development of a 500,000 sf, mixed-use project that includes retail, hotel and office tower as part of the Nashville Sounds Baseball Riverfront Redevelopment Project. Sustainability Goal: LEED-CS. Client: Hastings Architecture & Associates.
- **D1 and D2**, Washington, DC 2007-2009
Sustainability consulting for development of a mixed use project in the Southeast Federal Center. Includes 580,000 sf of office space and 293,000 sf of residential, with retail at ground level. Sustainability Goal: Targeting LEED Certified. Client: Shalom Baranes Associates
- **Lafayette Tower**, Washington DC, 2006-2007
224,866 sf commercial office space developed by the Louis Dreyfus Property Group Facilitating green building charrette, providing design phase support and LEED documentation coordination. Client: Kevin Roche John Dinkeloo & Associates
- **Tennessee Association of Realtors**, Nashville, TN, 2006-2007
Sustainable design consulting for new 12,000 s.f. headquarters building. Client: Manuel Zeitlin Architects
- **Navy Federal Credit Union Heritage Oaks Campus**, Pensacola, FL, 2005-2007
Developing two new buildings totaling 450,000 sf, a parking structure, and campus-wide sustainability programs. Sustainability Goal: LEED Gold rating. Client: ASD Architects
- **Shapiro & Duncan Headquarters**, Rockville MD, 2005-2006
New corporate headquarters facility. Sustainability Goal: Targeting LEED Silver/Gold rating. Client: Shapiro & Duncan
- **51 Louisiana Avenue**, Washington, DC 2005-2007
312,000 sf new Class "A" office building designed by Richard Rogers Partners for the JBG Companies. Sustainability Goal: Targeting LEED Core and Shell pilot Certified rating. Client: HKS Architecture

- **Fannie Mae Foundation Headquarters** Washington, DC, 2004-2005
1.5 million sf Class “A” corporate offices in Waterfront Redevelopment complex.
Sustainability Goal: Targeting LEED Silver rating. Client: Shalom Baranes Associates
- **1101 New York Avenue**, Washington, DC, 2004-2005
385,000 sf Class “A” office building by the Louis Dreyfus Property Group.
Sustainability Goal: Targeting LEED Core and Shell pilot Silver rating
Client: Kevin Roche John Dinkeloo & Associates
- **National Association of Realtors DC Headquarters**, Washington, DC, 2002-2005.
90,000 sf owner-occupied commercial office building with leased floors. Provided design phase facilitation, construction phase support and developed educational program.
LEED NC Silver Rating Awarded 2005. Client: CarrAmerica Development/NAR
- **Tower II Office Building**, Rockville, MD, 2003-2004
281,000 sf Class “A” office building. Sustainability Goal: Targeting LEED Silver rating.
Client: The Tower Companies
- **Navy Federal Credit Union Call Center**, Pensacola, FL, 2002-2004
56,000 sf owner-occupied employee-centered office building. We are currently helping the owner in developing an expanded campus to include 3 new LEED Gold buildings totaling
LEED NC Gold Rating Awarded 2004. Client: ASD Architects

Projects: Multi-Unit Residential (21 projects)

- **White Flint Crossing**, Rockville, MD, 2007-2009
Providing LEED feasibility and sustainability consulting services for a mixed use project that includes 400,000 sf of residential space and 200,000 of retail. Sustainability Goal: LEED-NCv2.2. Client: The JBG Companies/HKS Architecture
- **Gateway Tower**, Nashville, TN , 2007-2009
Sustainability consulting for development of a 180,000 sf residential condo building as part of the Nashville Sounds Baseball Riverfront Redevelopment Project. Sustainability Goal: LEED-NCv2.2. Client: Hastings Architecture & Associates
- **Griffin Apartments**, Nashville, TN , 2007-2009
Sustainability consulting for a 140 unit apartment building with ground floor retail space including the preservation and adaptive re-use of two existing 2-story historic homes on site. Sustainability Goal: LEED-NCv2.2. Client: Hastings Architecture & Associates/Crosland Development
- **Gateway Tower**, Nashville, TN , 2007
Sustainability consulting for development of a 180,000 sf residential condo building as part of the Nashville Sounds Baseball Riverfront Redevelopment Project. Sustainability Goal: LEED-NCv2.2. Client: Hastings Architecture & Associates

- **D1 and D2, Washington, DC 2007-2009**
Sustainability consulting for development of a mixed use project in the Southeast Federal Center. Includes 580,000 sf of office space and 293,000 sf of residential, with retail at ground level. Sustainability Goal: Targeting LEED Certified. Client: Shalom Baranes Associates
- **North Tract Lofts, Arlington VA, 2006**
Facilitating green building charrette, providing design phase support, coordinating green building documentation for presentation to Arlington County. Sustainability Goal: Incorporating LEED requirements for Arlington County. Client: The Preston Partnership
- **Waterfront Mixed Use, Washington, DC 2006**
2,526,500 sf residential, office and retail development in southeast Washington. Sustainability Goal: LEED Certified/Silver Client: Shalom Baranes Associates
- **DC Housing Authority, Washington, DC 2006**
Charrette facilitation for 3 projects applying green building principals to facilities owned and maintained by DCHA for residents with low income. Client: The Enterprise Foundation/DCHA
- **Pavilions at Takoma, Washington, DC 2006-2007**
144 unit condominium building. Sustainability Goal: LEED Certified. Client: Centex Homes
- **Terrazzo Mixed Use Development, Nashville, TN 2006-2007**
Residential, office and retail project in downtown Nashville. Sustainability Goal: LEED Silver. Client: Hastings Architecture Associates
- **Trenton Street Condominiums, Arlington, VA, 2006**
Market rate/affordable condominiums. Sustainability Goal: Incorporating LEED requirements for Arlington County. Client: Wesley Housing Development Corporation
- **Crystal Plaza 2, Arlington, VA, 2006**
Residential conversion from commercial office building. Sustainability Goal: Targeting LEED Certified rating. Client: The Charles E Smith Companies
- **Lee Hwy Residences, Arlington, VA, 2005-2006**
125,000 s.f., 70 unit condominium building. Sustainability Goal: Incorporating LEED requirements for Arlington County. Client: Holladay Holdings
- **Central Place Residential and Commercial Office, Arlington, VA, 2005-2009**
407,000 s.f. condominium and 456,000 s.f. commercial office buildings Sustainability Goal: Targeting LEED Certified rating. Client: The JBG Companies
- **Monument View Residential, Arlington, VA, 2005-2006**
715,000 s.f., 650 unit condominium building. Sustainability Goal: Incorporating LEED requirements for Arlington County. Client: Monument Realty

- **Zoso Residences**, Arlington, VA, 2005-2006
152,000 s.f., 114 unit condominium building. Sustainability Goal: Incorporating LEED requirements for Arlington County. Client: Ed Peete Company
- **“Alexandria Laundry” Condominiums**, Alexandria, VA 2004-2006
Eight unit condominium project in City of Alexandria on track to be first LEED Certified residential project in City of Alexandria. Sustainability Goal: Targeting LEED Silver rating. Client: William Cromley
- **IO Piazza Residences**, Arlington, Virginia, 2004-2005
Sustainability consulting for new condominium project. Sustainability Goals: Incorporating LEED requirements for Arlington County
Client: Ed Peete Company
- **Joule Residences**, Arlington, Virginia, 2004-2005
180,000 s.f. condominium project - one of the first to apply green building requirements as part of site plan conditions in Arlington County. Strategy includes green options for buyers. Sustainability Goal: Incorporating LEED requirements for Arlington County.
Client: Ed Peete Company
- **Waverly Gardens**, Howard County, MD, 2002-2004
102-unit moderate income senior housing development.
Sustainability Goal: Targeting LEED Silver rating. Client: Hord Coplan Macht
- **Parkview at Snowden River**, Howard County, MD, 2002
Four-story senior housing project. Client: Hord Coplan Macht

Projects: Government Sector (16 projects)

- **GSA National Maritime Center**, Martinsburg, WV, 2006-2008
Sustainability consulting for new 56,000 sf Coast Guard headquarters field office using LEED NC 2.2. Sustainability goal: LEED Silver. Client: Mackie Johnson Architect
- **US Consulate Compound**, Mumbai, India 2006
Sustainability consulting for development of new consulate campus in Mumbai, India for the US Department of State Overseas Building Operation with URS Corporation.
Sustainability Goal: Eligible for LEED Certified. Client: DBI Architects, Inc.
- **US Coast Guard Jackson Barracks**, New Orleans, LA 2006
Utilized US Army’s Sustainable Project Rating Tool (SPiRiT) to identify opportunities for improved sustainable design performance in creation of RFP for 4 buildings being renovated/built following Hurricane Katrina
Client: URS Corporation
- **GSA Lafayette Building**, Washington DC, 2005-2010
Major modernization of GSA building housing the Export Import Bank and Department of Veterans Affairs. Sustainability Goal: Targeting LEED Silver rating. Client: DMJM

- **GSA Herbert C. Hoover Building**, Washington, DC 2005-2007
Major modernization of 1 million s.f. historic GSA building housing the Department of Commerce. Sustainability Goal: Targeting LEED Silver rating
Client: GGA.Ehrenkrantz Eckstut & Kuhn Architects
- **Maryland National Capital Park and Planning Commission**, Montgomery County, 2005-2008. Multidisciplinary Services contract for sustainable design consulting services.
Client: Rhodeside Harwell
- **Lajes Field Air Force Base**, Portugal, 2005-2008
IDIQ contract for sustainable design consulting services.
Client: URS Corporation
- **Architect of the Capitol**, Washington, DC, 2004 -2008
IDIQ contract for sustainable design consulting services.
Client: HSMM Architects.
- **USDA South Building Modernization**, Washington, DC 2003-2008. Phase 3 and Phase 4a. Renovation of historic US Department of Agriculture Headquarters building. Facilitating Greening Study to develop capability for pursuit of LEED for Existing Buildings in future project phases. Sustainability Goal: Targeting LEED for Existing Buildings Certified rating. Client: Shalom Baranes Associates
- **GSA US Dept. of Transportation**, SE Federal Center, Washington, DC, 2003-4
2 million s.f. Class "A" commercial office space. Facilitated LEED feasibility study for project investigating adoption of LEED criteria at the end of DD phase for project with Michael Graves & Associates. Client: DMJMH+N
- **GSA Buffalo Courthouse**, Buffalo, New York, 2003-2006
266,020 s.f. new Federal Courthouse. Sustainability Goal: Targeting LEED Silver rating
Client: Kohn Pederson Fox Architects
- **GSA Headquarters Building Modernization**, Washington, DC, 2003-2005
846,000 sf (741,000 renovated, 105,000 sf new) office space. Sustainable Design coaching and consulting for renovation of current headquarters into a high-performance building. LEED Target: Silver Client: Shalom Baranes Associates
- **Montgomery County Circuit Court Judicial Center Annex**, Rockville, MD 2003-2004.
Facilitated LEED assessment charrette and provided guidance in development of sustainable design Program of Requirements for first Montgomery County project requiring LEED Certification. Client: URS
- **GSA Federal Office Building 8 Modernization**, Washington, DC, 2002-2004
Sustainability Goal: Targeting LEED Silver rating. Client: Boggs & Partners Architects
- **GSA Regional Office Building Modernization**, Washington, DC, 2002-2004
827,000 sf office building. Program Development Study and bridging documents. Sustainability Goal: LEED Silver rating. Client: GGA.EEK Architects.

- **McGuire Air Force Base, Squad Operations/AGS Building, 2002**
Identified opportunities for energy, materials and indoor environmental quality. Utilizing the US Army's Sustainable Project Rating Tool (SPiRiT). Client: DMJMH+N

Projects: Healthcare (2 projects)

- **Johns Hopkins University, Washington DC 2006-2008**
Sustainability consulting for renovation of urban building housing classrooms and offices using LEED for Existing Buildings Rating System. Sustainability Goal: LEED EB Certification. Client: Johns Hopkins University.
- **Franklin Square Hospital, Baltimore, MD, 2007**
Sustainability consulting for development of a residential tower addition. Sustainability Goal: LEED-NCv2.2. Client: Wimot/Sanz, Inc.

Projects: Construction Guidance (5 projects)

- **Food and Drug Administration Building, Gaithersburg, MD 2006-2008**
Construction phase sustainability guidance for general contractor.
Sustainability Goal: Targeting LEED Silver rating.
Client: Centex Construction
- **Battery Park City Authority, New York, NY 2006-2007**
Construction phase sustainability guidance for landscape maintenance facility interior
Construction Management team. Sustainability Goal: Targeting LEED CI Platinum rating.
Client: URS Corporation
- **Society for Neuroscience Headquarters, Washington DC, 2005-2006**
Construction phase sustainability guidance for general contractor.
Sustainability Goal: Targeting LEED CI Gold rating. Client: Spaulding & Slye Colliers
- **Service Employees International Union Headquarters, Washington DC, 2005-2006.**
Construction phase sustainability guidance for general contractor.
Sustainability Goal: Targeting LEED Silver/Gold rating
Client: James G. Davis Construction
- **1101 New York Avenue Construction, Washington, DC, 2005-2006**
Construction Phase LEED Support for 385,000 sf class A office building. Sustainability Goal: Targeting LEED Core and Shell pilot Silver rating. Client: Centex Construction.